PANTHER TANKS

TANK CRAFT

GERMAN ARMY AND WAFFEN-SS
DEFENCE OF THE WEST, 1945

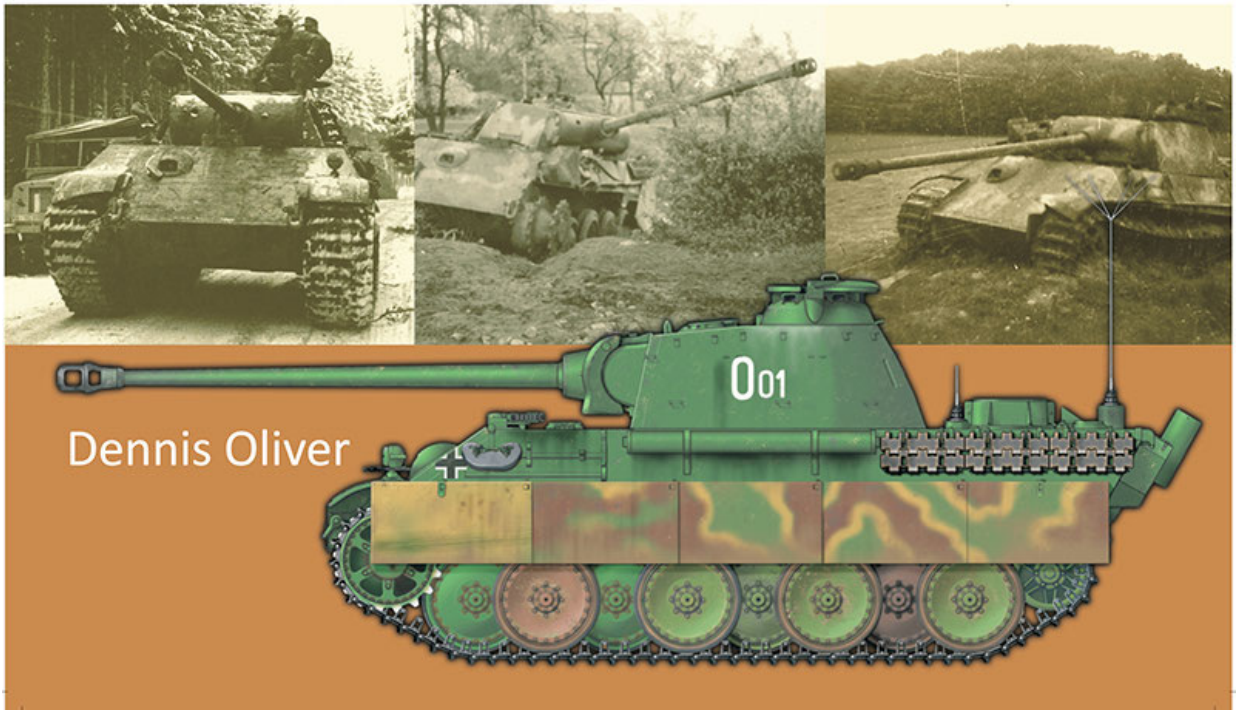
Dennis Oliver

PANTHER TANKS

GERMAN ARMY AND WAFFEN-SS

DEFENCE OF THE WEST, 1945

TANK CRAFT



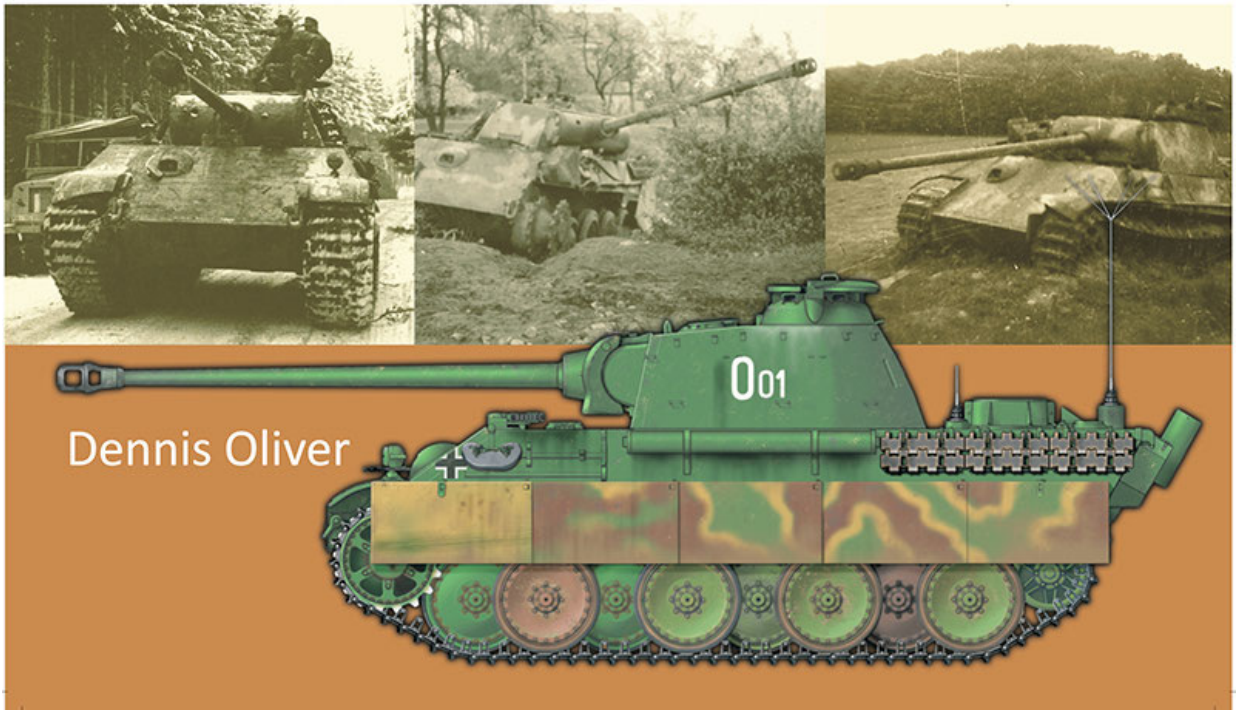
Dennis Oliver

PANTHER TANKS

GERMAN ARMY AND WAFFEN-SS

DEFENCE OF THE WEST, 1945

TANK CRAFT



Dennis Oliver

Commanded by Untersturmführer Hubert Kaufmann this Panther ausfG of 2.Kompanie, SS-Panzer-Regiment 1 was one of a small number of tanks built by Maschinenfabrik Augsburg-Nürnberg (MAN) with steel tyred roadwheels. The factory-applied camouflage scheme is typical of MAN and Daimler-Benz Panthers assembled from late August 1944 and the various patterns and colours are discussed on page 60.

TandCraft 18

PANTHER TANKS

GERMAN ARMY AND WAFFEN-SS

DEFENCE OF THE WEST, 1945

Dennis Oliver

Contents

Introduction

The Western Front 1945

The Panther Units of the Heer

Camouflage & Markings

Model Showcase

Modelling Products

The Panther Units of the Waffen-SS

Technical Details and Modifications

Factory-applied Camouflage

Product Contact Details

First published in Great Britain in 2019 by Pen & Sword Military

An imprint of Pen & Sword Books Ltd

47 Church Street, Barnsley, South Yorkshire, S70 2AS

Copyright © Pen & Sword Ltd, 2019

Artwork copyright © Dennis Oliver

ISBN 978 1 52675 5902

eISBN 978 1 52675 5919

Mobi ISBN 978 1 52675 5926

The right of Dennis Oliver and Oliver Publishing to be identified as the Authors of this work has been asserted by them in accordance with the Copyright, Designs and Patents Act 1988.

A CPI catalogue record for this book is available from the British Library.

All rights reserved. No part of this book may be reproduced or transmitted in any form or by any means, electronic or mechanical including photocopying, recording or by any information storage and retrieval system, without permission from the publisher in writing.

Pen & Sword Books Ltd incorporates the Imprints of Pen & Sword Military, Pen &. Sword Family History, Pen & Sword Maritime, Pen &. Sword Aviation, Pen & Sword Discovery, Wharncliffe Local History, Wharncliffe True Crime, Wharncliffe Transport, Pen & Sword Select, Pen & Sword Military Classics, Leo Cooper, The Praetorian Press, Remember When, Seaforth Publishing and Frontline Publishing.

For a complete list of Pen & Sword titles please contact

PEN &. SWORD LIMITED 47 Church Street, Barnsley, South Yorkshire, S70 2AS, England

E-mail: enquiries@pen-and-sword.co.uk Website: www.pen-and-sword.co.uk

Front cover. At top, Sheng Hui's 1/35 scale MAN March production Panther ausf G. Further examples of Sheng Hui's work can be seen in the Model Showcase section which begins on page 27. At centre, from left to right: A pre-September 1944 production Panther ausf G, possibly from III.Abteilung, Fuhrer-Grenadier-Brigade, photographed during the

Ardennes Offensive. A Panther ausf G of Kampfgruppe Bennigsen, April 1945. A Panther ausfG of Kampfgruppe Schulze, April 1945. At bottom. A Befehlspanzerwagen V Panther of Panzer-Regiment 130. Thisvehicleisalso shown and discussed on page 24 of the Camouflage & Markings section of this book.

With the exception of the Tiger, the Pzkpfw V Panther is probably the best known German armoured fighting vehicle of the Second World War period. Unlike the Tiger I and Tiger II, whose combined production ran to just over 1,800 vehicles, a total of almost 6,000 Panther tanks were manufactured by the end of the war and during the battles of 1944, perhaps the most crucial period of the conflict, this powerful tank formed the backbone of the Panzerwaffe (1).

Much of the development of the Panther was covered in the third book in this series Panther Tanks: German Army and Waffen-SS, Normandy Campaign 1944 and, mostly due to considerations of space, I have not repeated those passages here (2). During the summer campaigns of 1944, on both the Eastern and Western Fronts, the Panther ausf A was the most commonly encountered variant and in this current title I have deliberately chosen to concentrate on the Panther ausf G as the earlier models had both ceased production by mid-1944 and, at 2,953 vehicles assembled, this was in fact the most numerically important model.

The first of the army's Panther battalions had been formed in January 1943 with the creation of Panzer-Abteilung 51 with Panzer-Abteilung 52 raised in the following month. Both these units took part in Operation Zitadelle and although the Panther's debut had been less than spectacular, the Oberkommando des Heeres, or OKH, ordered that the majority of Panzer divisions were to receive a battalion of the new tanks which were at that time still undergoing trials in Germany. New orders for the uniform reorganisation of the Panzer divisions were issued on 24 September 1943 stipulating that the first battalion of each Panzer regiment would be equipped with Panthers organised into four companies each (3). This organisation remained largely unaltered until the autumn of 1944 when, after the horrendous losses suffered in Normandy, new establishments were formulated including the creation of the independent Panzer brigades and the mixed, or Gemischte, battalions which culminated in the Panzer-

Division 45 organisation. These are all discussed in the accompanying text and illustrated in the various diagrams.

The vehicle profiles of the Camouflage & Markings section were all based on period photographs and the interpretations are, of course, mine. Although we can make some reasonable assumptions with regard to camouflage colours many, in particular those introduced in the last months and weeks of the war, are the subject of some debate and where I have been forced to speculate I have tried to make this clear.

By the beginning of 1945, German soldiers were fighting to defend their homes, in some cases quite literally. Although the great natural barrier of the Rhine had yet to be crossed in the West, the Red Army was less than 50 kilometres from Königsberg, the capital city of East Prussia and, as the headquarters of the Teutonic Order, a powerful symbol of German militarism. For more than two years German industry had been pounded day and night by the Allied bombing offensive yet managed to turn out over 1,000 tanks between January and April 1945 when the last of the assembly plants were overrun (4). It is difficult to imagine any other military force surviving the staggering losses inflicted on the Wehrmacht during 1944, yet the Germans were able to mount two major offensives before the war was brought to an end and to conduct a tenacious defence until the very last day of the fighting. In all these operations the Panther would play an essential role.

Photographed in April 1945, this Panther is almost certainly one of the tanks allocated to Panzer-Division Clausewitz. This formation had a number of earlier model tanks on hand but most of the Panther ausfG models seem to have been fitted with the brackets to hold the Bildwandler jnfrared sights just visible in this image and shown in detail at right.

Notes

---

1. The best evidence we have gives a total of 5,995 but some records, notably those for the firm of DEMAG, did not survive the war and this number is an estimate.

2. I apologise in advance to those readers who were not able to obtain that book.

3. There were, of course, exceptions to this rule and a number of regiments concentrated their Panthers in the second battalion. This is explained further in the unit histories.

4. This figure does not include the hundreds of assault guns and tank destroyers produced during the same period.

The approximate location of the front line is shown as follows: A. 5 January 1945. B. 24 March 1945. C. 18 April 1945. D. 7 May 1945. Note that the front as shown for 7 May1945 is in fact the line of demarcation as agreed with the Soviets and some US Army units had penetrated beyond this, particularly in southern Germany and Czechoslovakia, only to be ordered to withdraw. The shaded area to the east of the 7 May line was occupied by the Red Army at that time while the area to the south was still in contention. Places of importance mentioned in the main text are indicated by the following numbers: 1. Maschinenfabrik Augsburg-Nürnberg. 2. Daimler-

Benz. 3. Maschinenfabrik Niedersachsen-Hannover. The main producers of the later model Panther. 4. Panzertruppen-Schule Bergen. 5. Schiess-Schule der Panzertruppen Putlos. 6. Panzerlehrgang (Panther) Erlangen. 7. Lehrtruppe der Panzertruppen-Schule Fallingbostel. 8. Truppenübungsplatz Munster. 9. Truppenübungsplatz Sennelager. 10. Truppenübungsplatz Ordruf. 11. Truppenübungsplatz Grafenwohr. Major training establishments. 12. Panzer-Stützpunkt Nord. 13. Panzer-Stützpunkt Mitte. 14. Panzer-Stützpunkt Süd 1944. 15. Panzer-Stützpunkt Süd 1945. Forward supply bases. 16. Heeres-Zeugamt Altengrabow. 17. Heeres-Zeugamt Grafenwöhr. 18. Heeres-Zeugamt Sennelager. All three were major supply centres for the distribution of the Panther to combat units.

The national borders depicted here are those of 1939 which changed considerably after the war, particularly in the east. The timeline below Illustrates the most significant events of the campaign from the start of the Wacht am Rhein operation until the German surrender.

16 December 1944. The German Army launches Wacht am Rhein, a major offensive in the Ardennes region. Achieving complete surprise, the German offensive manages to break through the American lines on a 70-mile front. Difficult terrain and poor weather hamper the German units and ominously none reach their assigned first-day objectives.

17 December 1944. In the early morning the Germans reach Schönberg, 10 kilometres from St. Vith. An armoured Kampfgruppe under SS-Obersturmbannführer Joachim Peiper thrusts past Buchholz while 12.Volksgrenadier-Division takes Losheimergraben.

18 December 1944. Kampfgruppe Peiper reaches La Gleize and brings Chauveheid under attack. After several attempts to capture Krinkelt,

the Germans bypass the town. After less than 48 hours the headquarters of both 6.Armee and S.Armee report shortages of fuel.

19 December 1944. US units come under attack at Dom Bütgenbach, less than 10 kilometres east of Malmedy. On the following morning units of6.Armee capture Stavelot.

21 December 1944. Although US Army units retake Stavelot, Bastogne is besieged and S.Armee captures St. Vith while the attacks on Dom Bütgenbach continue.

22 December 1944. Kampfgruppe von Böhm, formed around the reconnaissance battalion of 2. Panzer-Division, breaches the American line and advances towards Buissonville and Achene.

24 December 1944. Troops of Kampfgruppe Poschinger, made up of units from Panzer-Lehr-Division, enter Rochefort by stealth and after heavy fighting take the town. Buissonville is retaken by the Americans.

25 December 1944. The tanks of 2.Panzer-Division are halted just four miles from the river Meuse. Kampfgruppe von Böhm is surrounded and destroyed despite a relief effort carried out by units of 9. Panzer-Division. On thefoliowing day Bastogne is relieved.

30 December 1944. German units launch a heavy attack on the Bastogne corridor. The British attack on Houffalize, north-east of Bastogne, is halted by determined German resistance.

31 December 1944. Heeresgruppe G and Oberkommando öberrhein launch Operation Nordwind, an attack towards Strasbourg in the Saar valley. The main assault is led by 17.SS-Panzergrenadier-Division and 36.Volksgrenadier-Division with 21.Panzer-Division and 25.Panzergrenadier-Division in reserve.

3 January 1945. Allied counterattacks begin on the northern side of the Ardennes salient.

5 January 1945. With Operation Nordwind bogged down, a supplementary operation codenamed Sonnenwende begins and units of Oberkommando öberrhein manage to create a bridgehead on the Rhine between Strasbourg and Hagenau.

9 January 1945. Kampfgruppe Feuchtinger launches an attack against Hatten, south of Oldenburg. This action is virtually the last gasp of Operation Nordwind.

12 January 1945. Operation Nordwind is halted 13 miles from Strasbourg. British and US Army forces link up near La-Roche-en-Ardenne, north-west of Houffalize.

16 January 1945. l0.SS-Panzer-Division spearheads the drive south from Lauterbourg through Seitz, 2 miles west of the Rhine River, in an attempt to seize the Gambsheim bridgehead.

22 January 1945. Units of Heeresgruppe Gand Oberkommando öberrhein link up but are unable to force a crossing of the Moder River.
28 January 1945. The Germans withdraw from the Ardennes salient.

4 February 1945. The last German troops leave Belgium.

7 February 1945. The Germans destroy the floodgates in the Ruhr valley in the area west of Cologne, preventing the use of assault bridges.

This very early production Panther ausfA has the so-called letterbox aperture on the hull glacis and the binocular gun sight which was replaced from November 1943. The pattern produced by the application of Zimmerit is typical of Panthers manufactured by Deutsch Maschinenfabrik AG Co. (DEMAG). This photograph was actually taken in 1944 and many of these tanks were in service until the end of the war.

Two Panther ausf G tanks of SS-Panzer-Regiment 1 disabled during the fighting in the Ardennes in late 1944. The factory-applied camouflage schemes introduced in August are clearly visible on both and the placement of the Balkenkreuz on the nearest vehicle indicates that it was assembled by Daimler-Benz.

8 February 1945. British and Canadian troops launch an offensive into the Reichswald. On the following day the last Rhine bridge is destroyed in the Colmar Pocket after much of 19. Armee has been evacuated.

12 February 1945. Despite stiff opposition from elements ofPanzer-Lehr-Division and 116.Panzer-Division, British and Canadian troops capture Cleve.

17 February 1945. US 3rd Army breaks through the Siegfried Line and advances into Germany.

23 February 1945. US 9th Army attacks from the Roer bridgehead towards the Hürtgen Forest but is bogged down in savage fighting.

28 February 1945. US units in the Hürtgen Forest breakthrough near Erkelenz, west of Cologne, at great cost.

6 March 1945. Cologne surrenders. Early on thefollowing day; the Rhine bridge at Remagen is captured intact.

10 March 1945. Generalfeldmarschall Kesselring replaces von Rundstedt as Oberbefehlshaber West.

12 March 1945. Kampfgruppe Dunker attempts to defend Beckum, south-east of Münster, with four Tigers rendered immobile due to lack of fuel. These tanks had been intended for schwere Panzer-Abteilung 506 but were appropriated by elements of 116. Panzer- Division. With 48 hours the 1st US Army units cross the Moselle.

15 March 1945. Attempts by the Americans to expand the Remagen bridgehead fail. Two days later the bridge collapses.

20 March 1945. Saarbrücken falls to the Allies.

22 March 1945. Units of the US 3rd Army cross the Rhine at Oppenheim south of Mainz against ineffective German resistance.

23 March 1945. Panzergruppe Hudel attacks the Remagen bridgehead. British and Canadian units begin their assault across the Rhine above the Ruhr.

24 March 1945. Panzergruppe Hudel's counterattack near Eitorfeast of Bonn fails.

25 March 1945. British troops capture Wesel after an aerial bombardment almost completely destroys the town. On thefollowing day Main and Darmstadtfall to US troops.

27 March 1945. Several crews of schwere Panzer-Abteilung 508, which had recently returned from Italy, a re formed into a Kampfgruppe with a single Tiger and six Panthers. After fierce fighting US Army units capture Aschaffenburg.

28 March 1945. The Maschinenfabrik Niedersachsen-Hannover (MNH) assembly plant, which built over 800 Panther ausf G tanks, is severely damaged by Allied aerial bombing effectively ending the production of new vehicles although existing components were utilised until 9 April when the factories were captured. British troops begin their drive towards the Elbe as the US Army captures Marburg and Limburg.

1 April 1945. Panzergruppe Paderborn attacks US units at Nordborchen, north of the Dortmund to Kassel road. Two US armies link up at Lippstadt cutting off over300,000 German troops in the Ruhr Pocket.

2 April 1945. The British 7th Armoured Division reaches the Dortmund-Ems canal and over the next week the Allies capture Recklinghausen, Fulda and Kassel and Karlsruhe on the upper Rhine. The commander of Panzergruppe Paderborn, Hauptmann Uckert, is taken prisoner.

4 April 1945. After little more than token resistance the last German troops in Kassel surrender.

9 April 1945. Kampfgruppe Schulze, with just eleven tanks, attacks the US positions near Wietersheim, losing more than half its strength.

11 April 1945. Tanks and infantry of Kampfgruppe Grosan attack British positions at Engehausen near Buchholz where they manage to hold the enemy advance for two days. Weimar, Essen, Bochum and Goslar are captured by the Americans. The British take Celle, near Hannover, cutting the road to Hamburg. US Army units reach Schweinfurt.

12 April 1945. Hauptmann Scharfe, the new commander of Panzergruppe Paderborn, reports that all his tanks have either been destroyed or are inoperable. Braunschweig, the site of the Mühlenbau und Industrie AG (MIAG) factory, falls to the Allies.

13 April 1945. Elements of Panzer-Division Clausewitz launch a surprise attack against British units in the area of Ülzen-Verssen, inflicting heavy casualties. The last tanks of Kampfgruppe Schulze attack a US command post at Baringhausen, west of Hannover. The US 3rd Army captures Erfurt.

14 April 1945. Kampgruppe Grosan attacks British units at Ahlften on the Haiburger Strasse north ofSoltau, withdrawing through Bassel. On the same day, the British reach Bremen and US units capture Gera and Bayreuth.

15 April 1945. Twenty-one Panthers, originally allocated to 7. Panzer-Division, are acquired by ¡¡.Abteilung, Fallschirm-Panzer-Regiment Hermann Göring directly from the MAN plant at Nuremburg. These are the last Panther tanks to be issued.

17 April 1945. British units attempt to outflank Soltau but are repulsed by a single Tiger ofKamfgruppe Grosan.

18 April 1945. The tanks of Panzer-Division Clausewitz drive the British from their positions around Wittingen. The US Army takes Magdeburg, Düsseldorf and Nuremburg, overrunning the MAN factory, the most important manufacturer of the later model Panthers. American units advance into western Czechoslovakia. The British capture Üizen and Lüneburg.

21 April 1945. Elements of Panzer-Division Clausewitz, led by four Panthers, capture the Gifhorn-Brome road south of Wittingen, surprising US units who mistake them for Americans.

22 April 1945. US 7th Army captures a bridge across the Danube. British troops reach Bremen. The next day, Dessau and Harburg are cleared of German troops and Frankfurt is captured.

24 April 1945. British and Canadian troops enter Bremen. US units cross the Danube at Dillingen and capture Ulm. The Daimler-Benz plant at Berlin-Marienfelde, which had assembled1,004 late model Panthers, is occupied by Red Army troops.

25 April 1945. US and Soviet units meet on the Elbe at Torgau south-west of Berlin.

29 April 1945. British troops cross the Elbe near Hamburg. The US 7th Army reaches Munich.

30 April 1945. Hitler commits suicide, appointing Grossadmiral Karl Dönitz as his successor. US and Soviet units meet at Ellenburg, south of Berlin.

2 May 1945. The British reach Lübeck on the Baltic coast. The next day, Generalmajor Alwin Wolz, the garrison commander, declares Hamburg an open city and surrenders to the British. US troops reach the Brenner Pass on the Italian border.

4 May 1945. Admiral Hans-Georg von Friedeburg, representing the German government, arrives at Field Marshal Montgomery's HQ to surrender all German forces in Holland, North-west Germany and Denmark. The US 7th Army takes Innsbruck, Salzburg and Berchtesgarten.

5 May 1945. The US 3rd Army takes Pilsen in Czechoslovakia and prepares to drive towards Prague.

7 May 1945. Generaloberst Jodi as OKW Chief of Staff, signs Germany's unconditional surrender. All operations are to cease at one minute after midnight the next day.

Photographed in the railway yards at Aschaffenburg in April 1945, these complete Panther turrets may have been destined for conversion to

Pantherstellungen, a metal pillbox that Incorporated a tank turret. The camouflage pattern on the nearest turret is a good example of how the factory-applied schemes had evolved from a standardised pattern to random patches of colour.

Panzer-Regiment 3. Formed in October 1935 from Reiter-Regiment 12, the regiment was attached to 2.Panzer-Division and remained with that formation until the end of the war. The regiment served in the Polish Campaign, in France and the Balkans and in 1941 took part in the invasion of the Soviet Union. The regiment's ¡.Abteilung was reequipped with Panthers in May 1944 and with the rest of the division fought in the Normandy battles and the subsequent retreat through France where it was largely destroyed.

By November the regiment had been rebuilt and reported on 14 December 1944, just prior to the commencement of the Ardennes Offensive, that sixty-four Panthers were on hand (1) while the regiment's second battalion, a mixed formation, was equipped with twenty-two Sturmgeschütz III assault guns and twenty-four Panzer IV tanks.

In January 1945, with the end of the Ardennes Offensive, the division retreated towards Clervaux in northern Luxembourg and in the following weeks fought in the defensive battles in the Eifel around Prüm and Bitburg and along the Moselle River. On 15 March the regiment reported that thirty-five Panthers were on hand, although just four of these were considered to be combat-ready, and while the remnants of Panzerausbildungs-Verband Thüringen, an ad-hoc unit formed from elements of Panzertruppen-Schule Bergen, were attached to the division in late March 1945, they probably brought little in the way of armoured assets with them (2).

In early April 1945, the division was operating in the area around Schweinfurt and Bamberg and, badly depleted, was promised the second battalion of Panzer- Regiment 22 equipped with twenty-two new Panthers as reinforcements but these never reached their destination and instead

supported Kampfgruppe von Hobe fighting further to the south near Munich.

At about the same time, on 3 April 1945, Panzer-Regiment 3 was allocated twelve new Panthers and these were probably very late production vehicles. It is unclear when these tanks were actually delivered but within a few days the Americans launched a major attack in this sector towards Hammelburg, north-east of Schweinfurt, and if the new tanks had arrived at their destination they were probably very quickly lost. In these last battles the commander of the regiment's Stabs-Kompanie, Oberleutnant Peter Prien, was nominated for the award of the Ritterkreuz on two separate occasions but the war ended before Prien received the medal, although it was apparently authorised via telephone by OB West on the day after the German surrender. Scattered remnants of the division were taken into captivity by US Army units in southern Germany around Plauen and in north-western Czechoslovakia in May 1945.

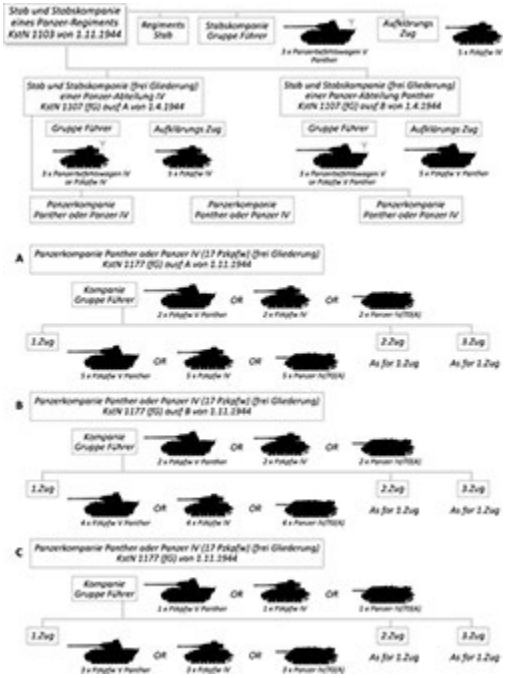
This Panther ausf G of 3.Kompanie, panzer-Regiment 3 was abandoned by its crew due to a mechanical failure in Clervaux, in northern Luxembourg, on 25 January 1945. At that time most of the Panthers of the regiment's I abtailung were November 1944 production models identified by the self-cleaning rear idler, raised housing for the crew compartment heater and the Flammvernichcter exhaust mufflers the company number of 301 is depicted as a white stencilled outline on the turret side, with possibly a dark centre, and as solid white numbers on the turret rear.

Panzer-Regiment 6. Formed in 1935 with two battalions of four companies each, the regiment was attached to 3. Panzer-Division and served in Poland, France and Russia. On 6 August 1943, I.Abteilung, by now reduced to three companies, began its conversion to Panthers and in January 1944 was temporarily attached to Panzer-Lehr-Division to complete its training.

PANZER-REGIMENT, NOVEMBER 1944

On 3 August 1944 Oberkommando des Heeres; or OKH, issued orders that all Army Panzer divisions were to be reorganised according to a standardised configuration referred to as Gliederung Panzer-Division 44. This was to be accomplished using the instructions issued for 1 April 1944 with the stipulation that any changes were to be completed by divisions within '...the bounds of their available personnel and material.' This phrase obviously a I lowed for a great deal of initiative. In November 1944further instructions were issued to be used for new formations or units undergoing rebuilding and these allowed for companies to be equipped with either the Panther, Pzkpfw IV tank or Panzer IV/70 tank destroyer. The companies could be made up of seventeen (A), fourteen (B) or ten (C) vehicles each, with the three platoons containing five, four or three tanks respectively. It is not known how many formations actually used the

November instructions and it is almost certain that none were put into effect until 1945.



During the early hours of 6 June 1944, as the battalion's tanks were being loaded onto railway cars in preparation for a return to the East and its parent formation, the Allied invasion began and the tanks were ordered back to the front to serve as the Erst battalion of Panzer-Lehr-Regiment 130. At the same time, I.Abteilung, Panzer-Lehr-Regiment 130 was being raised and equipped with new Panther tanks but would not complete its training before late August.

Panzer-Regiment 6 fought in the battles for Normandy where it was almost completely destroyed, reporting at the end of July that just eight tanks were on hand. In this state the remnants of the Panther battalion took part in the retreat to the Westwall and the Siegfried Line battles in Luxembourg until it was withdrawn from the front in late October 1944. The Panzer-Lehr-Division was partially rebuilt in November, with fifty-six new Panther tanks allocated to the first battalion, and returned to the front where it took part in

the attempts to halt the advance of the US 3rd Army in the Saar region (3). In December 1944, prior to the commencement of the Ardennes Offensive, the first battalion of Panzer-Regiment 6 rejoined 3.Panzer-Division on the Eastern Front. Its training complete, I.Abteilung, Panzer-Lehr-Regiment 130 operated as a semi-independent unit until February 1945 when it rejoined the division (see below). Confusingly, an OKH order of 7 November directed that I.Abteilung, Panzer-Regiment 6 be renamed I.Abteilung, Panzer-Lehr-Regiment 130 and vice versa, only to be rescinded by a further order of 20 December 1944. Many modern accounts incorrectly state that the name change took place.

Panzer-Regiment 15. Formed in October 1937 from elements of Panzer-Regiment 2 and Panzer-Regiment 5, this unit took part in the fighting in Poland and the advance into Belgium and Flanders in 1940. Following the French campaign the regiment was attached to the newly formed 11. Panzer-Division and the regiment's I.Abteilung began its conversion to the Panther in May 1943.

When the Normandy invasion took place in June 1944, the division was stationed in southern France as the only armoured element of Heeresgruppe G. Commanded by Oberst Meinrad von Lauchert, Panzer- Regiment 15 was at about half strength in early August with forty-nine Panthers and twenty-six Pzkpfw IV tanks on hand (4). The division also had a handful of self-propelled guns with Panzerjäger-Abteilung 51.

This Panther ausf G of Panzer-Regiment 15 was photographed near Fernegierscheid, approximately 20 kilometres north-east of Remagen, in early April 1945. A company number, which appears to be 311, has been painted onto the spare tracks on the turret side in white. The swastika marking on the hull glacis, just visible here, was probably added by the tank's captors.

Photographed in the town ofHotton, 20 kilometres north-west of Houffalize in Belgium on 26 December 1944, these tanks of Panzer-Regiment 16 were part of Kampfgruppe Bayer which had attempted to capture the town on the previous Thursday. The Panther ausf G has the extended mantlet of the main gun, introduced into production from September 1944. The small contrasting dots of colour incorporated into the camouflage scheme, a feature of Daimler-Benz produced vehicles, are just visible on the turret and quite clear on the hull Schürzen.

When the Allied armies landed on the beaches of the Côte d'Azur on 15 August 1944, the division conducted a fighting withdrawal along the Rhone valley towards Besançon.

Although the fighting here was just as fierce as the battles taking place further to the north, the Germans had continually managed to escape encirclement, unlike the units in Normandy. Consequently, by September 1944, ll.Panzer-Division was the only armoured formation in the West

which could field a Panzer regiment made up of two battalions, each of four companies (5).

The division fought in the battles in Alsace and took part in the Ardennes Offensive, with I.Abteilung reporting that forty-seven Panthers were on hand, with another thirty-seven in transit, the last of which arrived a full 48 hours after the assault commenced. During the first weeks of the new year the division took part in the battles in the Saarland and along the Moselle River.

In March 1945, with the remnants of 9.Panzer-Division, the division took part in the defence of Cologne and the attacks on the Remagen bridgehead near Bad Honnef. The German formations were by this time divisions in name only, with Panzer-Regiment 15 reporting on 15 March that although thirty-three Panthers were on hand, just fourteen of those were fully serviceable. In addition to being understrength, the tanks of Panzer-Regiment 15 had been forced to disengage from their positions around Düsseldorf and travel to Remagen on their own tracks, a distance of over 100 kilometres. In April the division was transferred to 7.Armee based in central Germany and withdrew through Hesse and Thuringia towards the Sudetenland. By the end of the month the division was strung out between Domazlice and Volary in the present-day Czech Republic and had been split into a Kampfgruppe made up of a company of tanks with the infantrymen of Panzergrenadier-Regiment 111, under Generalmajor Freiherr Treusch von Buttlar-Brandenfels, and the main body of the division, which was effectively immobilised by a complete lack of fuel, commanded by Generalleutnant Wend von Wietersheim (6).

On 2 May 1945, the division received orders to move east to face the units of the Red Army which were approaching rapidly. Realising that his men could not possibly halt the Soviet advance, Wietersheim approached the US Army units to the west and offered his division’s surrender which took

effect two days later. At this time the Panzer regiment could field a single Panther and six Pzkpfw IV tanks and some of these needed to be towed to the American lines.

Panzer-Regiment 16. The regiment's first battalion began its conversion to the Panther in early July 1944 and in September was attached to Panzer-Brigade 111. When the brigade was disbanded the battalion returned to its parent formation, 116.Panzer-Division, and remained there until May 1945.

The regiment was rebuilt in November 1944 with one four-company battalion equipped with Panther tanks and one mixed battalion with two companies of Pzkpfw IV tanks and two companies of Sturmgeschütz III assault guns. However, at the start of the Ardennes Offensive less than one month later, the regiment reported that just forty-one Panthers and twenty-one Pzkpfw IV tanks were available for immediate deployment (7).

During February 1945 the division supported the paratroopers of 1. Fallschirmarmee, fighting along the Niederrhein, and in March opposed the Allied crossings of the Rhine, managing to take part in the defence against both the land and airborne phases of Operation Varsity.

In a report of 15 March 1945, 116.Panzer- Division reported that thirty-two Panthers were on hand but just eight of these were considered combat-ready. On 24 March the battalion received five new tanks and these were the last replacements I.Abteilung would be allocated before the end of the war.

On 14 April 1945 Oberbefehlshaber (OB) West ordered that a Kampfgruppe was to be formed from the remnants of 116.Panzer-Divsion made up of a single tank company equipped with fourteen Panthers and a platoon of four Sturmtiger 38cm mortars. The Sturmtigers of Sturm- Mörser-Batterie 1002 did indeed supported the Panzers with devastating effect in the fighting around Kirchhellen and Feldhausen, as mentioned in Heinz Günther Guderian's history of the division, but were all reported to have been destroyed by their crews in late March (8).

For much of April 1945, the mass of the division was subordinated to Armee- Abteilung-Lüttwitz and was largely destroyed in the battles for the Ruhr Pocket, surrendering to units of the US Army on Wednesday, 18 April 1945. A small Kampfgruppe, under the direct command of OB West, fought on the Elbe and in the Harz Mountains until 30 April 1945 when their fuel and ammunition were exhausted.

Panzer-Regiment 22. Raised in May 1943, the regiment was attached to the reformed 21. Panzer-Division and fought in the Normandy battles where it lost most of its equipment. At the end of July 1944, II.Abteilung was withdrawn from the front and sent to Mailly-le-Camp, south of Reims in France, to begin training on the Panther. At this time the battalion received five tanks but subsequent deliveries were invariably diverted to the units fighting in Normandy and by October, when II.Abteilung had been transferred to Germany, those five had also disappeared. At Grafenwöhr the battalion received six elderly Panther ausf D and ausf A models which had been left in Germany by I.Abteilung, Panzer-Regiment Hermann Göring after that unit had completed its training and returned to the East. In the same month Panzer-Brigade 112 was disbanded and handed over its remaining tanks to the regiment's I. Abteilung which was with 21.Panzer-Division near Epinal as part of 5. Panzerarmee. These tanks were probably in need of repair and were in any case only enough to form one weak company. In the last days of December 1944 a total of twenty-two Panthers were received by I.Abteilung, providing enough

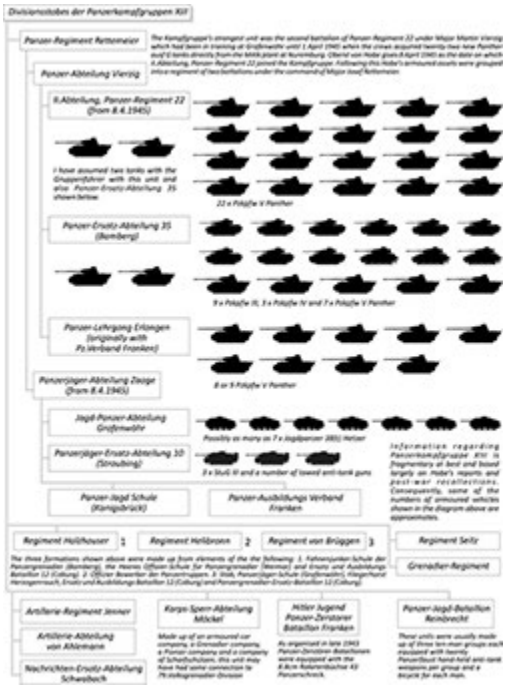
tanks to form two companies with the requisite crews drafted from II.Abteilung which was still in training at Grafenwohr. The division, with I.Abteilung, remained in the Saarpfalz region around Saarlautem, taking part in the attack towards Strasbourg and the fighting in northern Alsace, until 1 February 1945 when it was transferred to the East (9).

The second battalion, under the command of Major Martin Vierzig, remained at Grafenwohr until the first week of April when the crews were ordered to report to the MAN plant at Nuremburg to pick up twenty-two new tanks, all Panther ausf G models from the March production batch. From there Vierzig was ordered to join 2.Panzer-Division at Bamberg but the order was countermanded and II.Abteilung, Panzer-Regiment 22 was absorbed by Panzerkampfgruppe XIII, which had been formed from various training and replacement units (10).

From 8 April 1945 the battalion was involved in the defensive fighting between Wurzburg and Nuremburg and even managed to mount a limited counterattack near Seenheim to restore the line held by elements of 79.Volksgrenadier-Division. By 15 April, when the Kampfgruppe was fighting to defend Oberreichenbach, north-east of Nuremburg, most of the armour had been lost due to a shortage of fuel and the complete lack of a means to recover damaged vehicles and Vierzig was able to field just six tanks to support the 600-800 infantrymen that remained. Two days later in a fierce engagement near Grosshabersdorf another three tanks were lost and it seems that any surviving Panthers were incorporated into Panzerjager-Abteilung Zaage. By 23 April 1945, the surviving crews of II.Abteilung, Panzer-Regiment 22, without any vehicles, had been able to make their way to Linz and surrendered to the Americans when the war ended. On 1 May 1945 the last two Panthers of Panzerkampfgruppe XIII, now with Hauptmann Zaage's battalion, were abandoned on the western bank of the River Inn near Rosenheim.

PANZERKAMPFGRUPPE XIII/VON HOBE, APRIL 1945

Typical of the scratch formations raised in the last weeks of the war, Panzerkampfgruppe XIII was raised from units of the Ersatz Heer, or replacement army, of Wehrkreis XIII, the military district that encompassed northern Bavaria and western Bohemia with its headquarters at Nuremburg. Originally led by Oberst Freiherr Eugen von Massenbach, this unit is sometimes referred to as Panzerverband von Massenbach and it was probably created under that name. On 4 April 1945, command passed to Oberstleutnant, later Oberst, Cord von Hobe who led the Kampfgruppe until 5 May 1945 when it was disbanded.



Panzer-Regiment 33. The regiment's II .Abteilung was converted to a Panther battalion in May 1944 and after rejoining the regiment, and its parent formation 9.Panzer-Division, in July it was withdrawn once again and used to build Panzer-Abteilung 2105 of Panzer-Brigade 105. In November 1944, the battalion returned to Panzer-Regiment 33,

which had been badly depleted in the retreat through France, and was in the process of being rebuilt with a Panther battalion of four companies and a mixed battalion made up of two companies equipped with Pzkpfw IV tanks and two companies of Sturmgeschütz III assault guns. The division took part in the Ardennes Offensive, were it suffered very heavy casualties, and in the subsequent fighting in the Eifel mountain range.

In late February 1945, the division was involved in the attacks against the Remagen bridgehead but failed to reduce the American perimeter, ending the battle with just fifteen serviceable tanks. In March the division was part of the German force defending Cologne but was pushed out of the city, also losing its commanding officer Generalmajor Harald Freiherr von Elverfeldt, and eventually forced into the Ruhr Pocket. On 7 April 1945 an order was issued directing that the remnants of 9.Panzer-Division were to be formed into a Kampfgruppe consisting of one Panzer battalion made up of two companies of Panthers and one company of Pzkpfw IV tanks. The formation process was to be completed by 11 April and each company was to contain ten tanks. In addition, the second battalion of Regiment 33 was to be rebuilt from various units including a Panzer company of Kampfgruppe 116.Panzer-Division. The battalion was also to contain a company of Jagdpanzer 38(t) Hetzer tank destroyers, one company of Sturmgeschütz III assault guns and one company equipped with the Panzer IV/ 70/(V). The latter were to be picked up from Plauen, in Saxony near the present-day Czech border, and the battalion was transferred there on 17 April 1945, one day before the units trapped in the Ruhr Pocket surrendered. How much of this reorganisation was completed is not known as OB West ordered on 26 April that the division was to be disbanded and its personnel dispersed to other units.

Panzer-Lehr-Regiment 130. Formed in January 1943, the regiment was attached to Panzer-Lehr-Division. As mentioned above the regiment's I.Abteilung was in the process of converting to the Panther when the Normandy landings began and its place in the division was filled by

I.Abteilung, Panzer-Regiment 6. The battalion did not take part in the fighting in Normandy and in fact did not receive any tanks before mid-August 1944, when the first six Panthers were allocated. In September 1944 the battalion, with forty- four serviceable tanks, was attached to Panzer-Brigade 113 and was involved in the fighting for Arracourt as part of Kampfgruppe Bose in support of Panzergrenadier-Regiment 2113. When Panzer-Brigade 113 was disbanded on 1 October 1944, the Panzer battalion was withdrawn to Hungary to be rebuilt with four companies, each containing fourteen Panther tanks, with two tanks for the battalion staff and a further two for the regimental headquarters.

Photographed between Clervaux and Hosingen in northern Luxembourg, probably in January 1945; this Pzkpfw V PantherfyisfiG of I Abteilung, Panzer Regiment 33, has the later style gun mantlet introduced into production from september 1944 and the Kampfraumheizung raised crew compartment heater which was fitted from October, photographs of other tanks of this regiment's third company taken at the same time confirm that it was common practice to repeat the tank's number on the turret rear.

According to the caption of this US Signal Corps image, this Pzkpfw V Panther ausf G was photographed in the town of Kelberg, approximately 30 kilometres west of Koblenz on 11 March 1945, shortly after the town was captured by units of the US 11th Armoured Division. The American account of the battle states that Kelberg was defended by six German tanks, including at least one Tiger II. However, the only unit on the Western Front equipped with the Tiger II at this time, schweieJ'anzer-Abteilung 506, was fighting much further to the north and it was not uncommon for any large German tank to be incorrectly identified as a Tiger. If the date of the caption is correct, and it almost certainly is, this tank may be one of the last Panthers of either 2. Panzer-Divisiohor 9.Panzer-Division, both of which were retreating through this area at the time.

This organisation was amended and when the battalion returned to Grafenwohr in Germany it was rebuilt with two companies of Panther tanks and a company of Jagdpanther tank destroyers. Intriguingly, the official records show that I. Abteilung, Panzer-Lehr-Regiment 130 received a total of seventy Panthers between 19 October and 11 December 1944, ten more than would be required to fulfil the original four-company establishment. Just what became of these tanks is something of a mystery and a report prepared for OB West states that just seven Panthers were on hand in

December. It is almost certain that the battalion fought the coming battles with the thirty-one Panthers and ten Jagdpanthers allocated in late January and early February 1945 (11).

When I.Abteilung returned to its parent formation on 18 February 1945, the surplus crews of l.Kompanie were transferred to Fallingbostel to train on the BIWA infrared sighting equipment while the other companies took part in the battles between Kalkar and Goch, on the Dutch border south of Kleve, together with 116.Panzer-Division.

On 7 March 1945 the remaining units of the Panzer-Lehr-Division fell back across the Rhine, crossing the river at Wesel after fighting off elements of the US 9th Army. By 15 March 1945, the battalion's strength had been reduced to twenty-nine Panther tanks of which only thirteen were serviceable and later that month, the surviving tanks were concentrated in I. Abteilung while the Panzer crews without vehicles and the men of the maintenance company were formed into a new II. Abteilung and withdrawn to the Panzertruppen-Schule at Bergen (12).

In the final weeks of the war the Panzer-Lehr-Division took part in the battles for the Remagen bridgehead and the fighting in the Ruhr Pocket where the last survivors surrendered to units of the US Army on 15 April 1945.

Panzer-Abteilung 5. Formed in August 1943, the battalion was attached to 25.Panzergrenadier-Division and served in Russia and the Ukraine until it was largely destroyed in the summer battles of 1944.

The remnants were used to Panzer build-Abteilung 2107 of Panzer-Brigade 107 and when that formation was disbanded on 9 November 1944, its personnel and equipment were transferred to the newly reformed 2 5. Panzergrenadier-Division.

The battalion was rebuilt with a staff element, including an anti-aircraft platoon equipped with the Panzer IV Möbelwagen, one company of Panzer IV/70(V) tank destroyers and three companies of Panther tanks.

As late as 14 December 1944 just eleven Panthers had been received, of which as few as six may have been fully serviceable, but a further twenty-nine had arrived by Tuesday, 2 January 1945 (13).

A Befehlspanzerwagen V of Panzer-Lehr-Regiment 130 abandoned in Krefeld, on the Rhine north of Düsseldorf, in March 1945. Note the welded exhaust covers, Flammenvernichter mufflers and brackets for the stowage box for the infrared sighting equipment on the right of the rear hull plate. This tank is also shown on page 24 of the Camouflage & Markings section.

This photograph: Another Panther ausfG of Panzer-Lehr-Regiment 130 pictured during the spring of1945. The style of company number was an identifying feature of this regiment.

The division took part in Operation Nordwind, the last major offensive in the West which commenced on New Year's Eve, but was held in reserve during the early part of the assault. On 6 January 1945, 25. Panzergrenadier-Division, as part of Kampfgruppe Feuchtinger, was engaged in an attack against a number of the old Maginot Line forts opposite the Bienwald in an attempt to sever the US Army's supply lines to Strasbourg but was halted by an extensive minefield.

Shifting the focus of the attack further south to the defences between Hatten and Rittershoffen, the division renewed the assault on 8 January at about midnight with the men of the Pionier battalion and the assault guns of Panzeijäger-Abteilung 5 throwing themselves at the minefield and barbed-wire entanglements. In these battles the Germans were able to secure a few bridgeheads over the Moder River but these were very soon eliminated. On 26 January 1945, the offensive was halted and on the following day the division was withdrawn from the front line. In February the division was sent to the East and although almost all of its equipment was lost during the Soviet assault on the Oder Front many of the survivors managed to make their way to the West to surrender to the British or Americans.

Führer-Grenadier Brigade. Raised from a unit of Hitler's bodyguard in June 1944, the brigade served on the Eastern Front until September when it was reorganised with two battalions of infantry, one in armoured halftracks, and a tank battalion together with a number of support units. The brigade's Führer-Panzer-Abteilung, equipped with Panther tanks, was renamed III.Abteilung, Führer-Grenadier Brigade. The brigade took part in the Ardennes Offensive in December 1944 with the tank battalion reporting that thirty-seven Panthers were on hand. The brigade was involved in the fighting around Bastogne and the battles for the city of Luxembourg where the commander, Oberst Hans-Joachim Kahler, was seriously wounded. On 16 January 1945, with the offensive halted, the brigade was withdrawn from the front line and reformed as the Führer-Grenadier-Division while the tank battalion was expanded and renamed Panzer-Regiment 101. The division served on the Eastern Front until the end of the war.

Schwere Panzer-Abteilung 424. Badly depleted by the fighting on the Eastern Front, this battalion was disbanded in February 1945 with the remnants of the first and second companies forming schwere Panzerjäger-Abteilung 512, one of only two Jagdtiger battalions.

In March and April the crews of 3. Kompanie, which had been training at Paderborn under the command of Oberleutnant Busch, were incorporated into a Kampfgruppe made up from the tanks of Panzer-Ersatz-und Ausbildungs-Abteilung 500 and allocated two Tiger I tanks, a single Panther and one Pzkpfw IV tank. One of the Tigers was destroyed in the fighting at Paderborn railway station but much of the Kampfgruppe was able to reach Höxter, between Paderborn and Northeim, where they eventually surrendered to the Allies.

Schwere Panzer-Abteilung 508. On 4 February 1945 the second and third companies of this battalion handed over their remaining Tiger I tanks to schwere Panzer-Abteilung 504 and returned to Germany from the Italian Front to be reequipped with the Tiger II (14).

Photographed in Eschdorf, south of the Sûre River in northern Luxembourg on 29 December 1944, this Panther ausf G of III.Abteilung, Führer-Grenadier-Brigade has been fitted with what appears to be an extra radio aerial mount on the turret side. This tank is also shown in page 19.

This Panther ausfG is one of the thirty-seven tanks on hand with III.Abteilung; Fuhrer-Grenadier-Brigade at the start of the Ardennes Offensive. Photographed outside Heiderscheid, just two kilometres from the location depicted in the image on the previous page, this tank was destroyed when the battalion supported an assault made here by 79.Volksgrenadier-Division. The only markings visible are the Balkenkreuz on the hull side at the front and the vehicle's chassis number, or Fahrgestellnummer, on the glacis.

The battalion spent most of March 1945 in training but never received any new tanks(15).

On 24 March a large part of the battalion, probably most of 3.Kompanie, was detached and sent to Flensberg in northern Germany and by the end of the month the crews of 2.Kompanie were fighting as infantry between Husen and Paderbom. A few days earlier, on 27 March 1945, the battalion received a single Tiger and six Panthers and formed a small Kampfgruppe with the surplus crews of 1 .Kompanie fighting as infantry.

The allocation of these tanks is not mentioned in the official records and it is likely that they came from the Panzertruppen-Schule at Paderbom or another training establishment. I can find no further mention of these vehicles although they may have fought near Hofgeismar, north of Kassel, later withdrawing towards Berlin or they may have been destroyed in the fighting west of Paderbom.

Panzerjäger-Kompanie Strohm. Reported to have two Panther tanks on hand in January 1945, I can find no record of any allocation in the official documents and the tanks may have been taken over from another unit.

Panzer-Brigade 150. A total of five Panthers were allocated to the brigade's Kampfgruppe X and modified to resemble US Army M10 tank destroyers as part of Unternehmen Greif, the deception operation planned for the Ardennes Offensive.

In the event all were used in a conventional assault against the positions of the US 30th Infantry Division along the Malmedy to Spa road and either destroyed or abandoned after the battle.

Panzer-Abteilung 2108. Originally attached to Panzer-Brigade 108, this battalion was disbanded on 30 October 1944 after the fighting for Aachen and its remaining tanks were handed to 116.Panzer-Division. On 26 January 1945, the command elements were used to create the staff of Panzer-Regiment Coburg zbV and it was ordered that three new companies be raised (16).

Although two Panthers were allocated by the Heereszeugamt on 20 April 1945, both went to the second battalion of Panzer-Regiment 2 which was at that time defending the area north of Berlin against the Soviets. The elements of Panzer-Abteilung 2108 that had been reconstituted were absorbed by Panzer-Auffrischungs-Verband Krampnitz which was later subordinated to Panzer-Regiment 25 of 7.Panzer-Division.

Fallschirm-Panzer-Regiment Hermann Göring. Formed in October 1942, the regiment served in Italy and later on the Eastern Front. As this was the only unit of the Luftwaffe to be equipped with tanks I have included it here with the formations of the Heer (17).

On 28 February 1945, the regiment's II. Abteilung, which had been equipped with Pzkpfw IV tanks, was transferred to Grafenwöhr in Germany to begin training on the Panther. A total of twenty-one tanks were allocated to the battalion on Sunday, 15 April 1945 and by the following Sunday the battalion was ordered to join 17.SS-Panzergrenadier-Division which was fighting in western Germany and remained there until the end of the war. The tanks that were allocated to the battalion on 15 April had originally been earmarked for 7.Panzer-Division and were in fact the last Panthers issued by the Heereszeugamt before the end of the war.

Although the ad-hoc Kampfgruppen, or battle groups, formed in the last weeks and days of the war are far too numerous to list here, some mention at least should be made of the following units.

Panzer-Abteilung Putlos. This unit was created on 12 April 1945, from elements of Schiess-Schule Putlos, the German army's tank gunnery

school, and attached to Panzer-Division Clausewitz. The battalion contained two mixed Panzer companies and one Panzergrenadier company. On the afternoon of 17 April, the battalion was reorganised as Kampfgruppe von Bennigsen.

Kampfgruppe von Bennigsen. Commanded by Major Walter von Bennigsen, this formation was formed by renaming Panzer-Abteilung Putlos which had been reinforced with two Panther tanks and a number of armoured halftracks. Kampfgruppe von Bennigsen was part of the armoured element of Panzer-Division Clausewitz.

Panzer-Regiment Clausewitz. Formed from the remnants of Panzer-Brigade 106 Feldhernhalle and attached to Panzer-Division Clausewitz, the battalion was made up of two mixed Panzer battalions, although the second never received any tanks and was made up entirely of Panzergrenadier companies. According to the recollections of Generalmajor Martin Unrein, the division's commanding officer, the last tanks were destroyed by their crews on Saturday, 21 April 1945. The documentation concerning this division, including Generalmajor Unrein's final report, is sometimes contradictory and often confusing and I have compiled a chart, shown on page 53, which details the development of the armoured units of Panzer-Division Clausewitz from the most reliable information that we have.

Kampfgruppe Schulze. When the tanks of Panzer-Lehr-Regiment 130 left Germany to rejoin their parent division at the front, a number of men under the command of Major Paul Schulze were left behind at the Panzertruppen-Schule Bergen to act as a training and replacement unit for the division. During the first week of April 1945 Major Schulze, with just five Panthers, was ordered to make his way to the Panzer-Lehr-Division which was at that time fighting in the Ruhr Pocket (18).

Schulze's tanks were joined by a platoon of six Tiger I tanks led by Oberleutnant Rudolf Fehrmann, and were able to push over 30 kilometres into the enemy's rear before they were forced into battle on 9 April at Wietersheim, about 40 kilometres east of Hannover where four of the Panthers were lost and one of the Tigers was damaged. On 11 April 1945, near Bückeburg, just south of Wietersheim, the surviving Panther and two of the Tigers became bogged as they negotiated the muddy tracks of a heavily wooded area and, realizing that they could not be moved, Schulze ordered the crews to destroy all three. On 12 April, when the last tank ran out of fuel, Major Schulze disbanded his Kampfgruppe. A single Tiger of Schulze's command, which had earlier returned to Fallingbostel to be repaired, was ordered to move to Ostenholz and report to Kampfgruppe Grosan. The actions of Kampfgruppe Schulze and Tigergruppe Fehrmann are also discussed at some length in Tiger I and Tiger n Tanks: German Army and Waffen-SS The Last Battles in the West 1945, the thirteenth book in this series.

A late production Panther ausfG of Kampfgruppe Bennigsen. Note the special rear stowage box for the infrared equipment on the right of the hull

rear plate and the brackets on the turret sides for spare wheels. This tank is also shown and discussed in the Camouflage & Markings section on page 26.

Although of poor quality, this image is extremely interestingvs it depicts what is almost certainly the last surviving Panther of Kampfgruppe Schulze. The insignia on the hull glacis, for some time thought to have been a letters, is actually a number 8 and is quite clear in the only other known photograph of this tank. This vehicle is also shown and discussed further on page 26 of the Camouflage & Markings section.

Kampfgruppe Grosan. Formed in late March or early April 1945, under the command of Oberst Erhard Grosan, this formation was made up of a single Panther, two Tigers and two assault guns from the Panzertruppen-Schule Bergen supported by infantrymen of various units including the 2.Marine-Division.

The Kampfgruppe went into action for the first time on 11 April when the tanks attacked British positions at Engehausen near Buchholz, managing to halt an enemy advance. After this Grosan's men were involved in an attack on the Aller bridgehead near Essel and in the defence of Soltau between Bremen and Lüneburg. The Panther, with the two assault guns, took part in an attack towards Ahlften, on the Soltau to Buchholz road, on 14 April in support of the Tigers which advanced to Wolterdingen. But this is the only mention I can find of this vehicle and as the last tank of Kampfgruppe Grosan, a Tiger, was in action on 18 April at Bispingen, 15 kilometres north of Soltau, the Panther was probably lost or abandoned shortly before that date.

On 23 April 1945, the last troops of Kampfgruppe Grosan surrendered at Hof Willenbockel, a small farming community east of Münster. In some accounts, particularly those complied by German authors, Grosan's formation is mentioned as being formed from the remnants of Panzer-Division Bergen. There is, however, no official record of this division and it is possible that the name was briefly considered for the proposed Panzer-Division Niedersachsen, which was itself very quickly renamed Panzer-Division Thüringen.

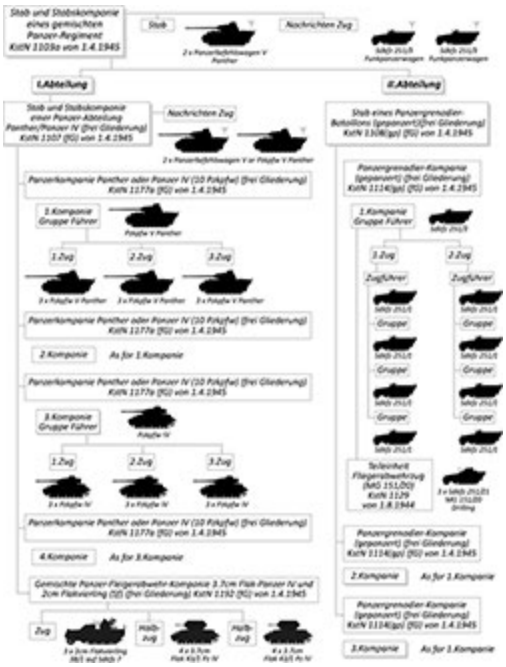
Panzergruppe Paderborn. Formed in March 1945, this unit was originally allocated five Panthers, eleven Tiger I, six Tiger II and a number of elderly Pzkpfw III tanks and halftracks from Panzerlehrund Ausbildungs-Abteilung Tiger, a training facility based at Paderborn (19). However, five of the Tigers were appropriated by schwere Panzer-Abteilung 424 and schwere Panzer-Abteilung 508 and Panzergruppe Paderborn would eventually be equipped with four Panthers, fifteen Tiger I, three Tiger II and four Pzkpfw III tanks.

In late March, the tanks took part in the fighting against US armoured units around the airport south of Paderborn and also at Nordborchen,

withdrawing towards Detmold, south-east of Bielefeld by 2 April, where the Kampfgruppe commander, Hauptmann Uckert, was taken prisoner. By 12 April all the unit's tanks had been either disabled or abandoned with the exception of a single Tiger which was towed to the German lines at Detmold. This unit should not be confused with Panzer-Kompanie Paderborn which was raised in October 1944 for the defence of Aachen.

PANZER-REGIMENT, APRIL 1945

On 25 March 1945, Oberkommando des Heeres (OKH) ordered that all Panzer and Panzergrenadier divisions - with the single exception of 232.Panzer-Division - were now to be organised in accordance with the instructions issued for Gliederung der Panzer-Division 45. Each division was to contain a single Panzer battalion made up of two companies of Pzkpfw V Panther and two companies of Pzkpfw IV tanks. The Panzer-Abteilung was combined with a Panzergrenadier battalion under a regimental headquarters to form a Gemischte, or mixed, Panzer-Regiment. Those divisions unable to comply with the March 1945 order due to a lack of personnel or equipment were to be reorganised as Kampfgruppe Panzer-Division 45, the structure of which was similar to the full division but with a much reduced infantry and artillery component Detailed instructions in the form of Kriegstärkenachweisung, or KStN, were issued on 1 April 1945 and all formations were to report their progress by 1 May 1945, although it appears that none did.



Panzer-Kompanie Kummersdorf. This company was formed on 31 March 1945 and contained four Panthers, one Pzkpfw III and two Pzkpfw IV tanks with one Hummel and one Nashorn self-propelled gun. In addition, the company had a Tiger I and one Tiger II and a single Jagdtiger. On 19 April 1945, Panzer-Kompanie Kummersdorf was at Luchau near Hamburg and may have seen some action here against the advancing British. On 21 April the company was ordered to join Kampfgruppe Mows south of Berlin. This unit should not be confused with Panzer-Abteilung Kummersdorf which was absorbed by Panzer-Division Müncheberg and fought in Berlin

Panzerkampfgruppe Nord. Raised by an order of 13 February 1945 as part of Aktion Gneisenau (20), this unit was to be made up of a headquarters with support platoons and a Panzergrenadier company, all of which were taken from Panzertruppen-Schule Bergen. A tank battalion was to be made up of a mixed company, including ten Panther and six Tiger tanks, and a light company, both raised from the assets at Bergen. In addition, a mixed, or Gemischte, company with thirteen Panther and Tiger tanks and a light company were to be provided by

the Scheiss-Schule Putlos, the army's tank gunnery school. The formation was suspended by an order from Hitler but later revived under Aktion Leuthen which came into effect on 24 March 1945. Most of the units originally allocated to the Kampfgruppe were, however, used to form Panzer-Division Clausewitz or expended in small actions in the local area.

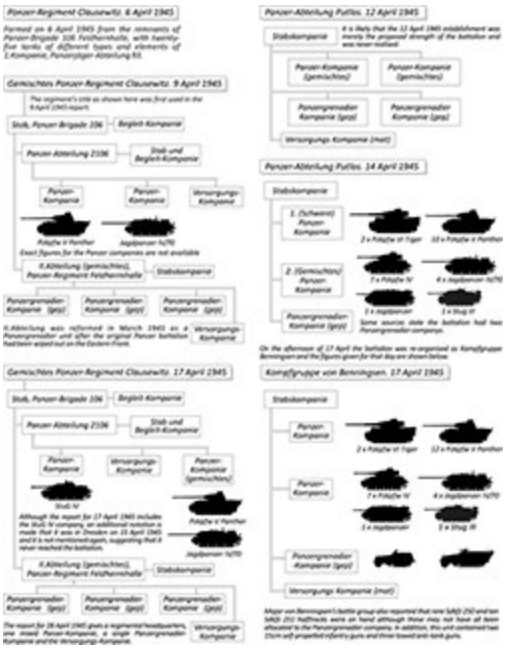
Panzer-Stützpunkt Mayen. Forward support bases, or Stützpunkte, were normally set up at major rail or road junctions and their function was to administer the supply of vehicles, spare parts and other necessary materials. In early 1945 the support bases in the West included Panzer-Stützpunkt Nord at based at Bergisch Gladbach, outside Cologne, Panzer-Stützpunkt Mitte at Kaiserslautern and Panzer-Stützpunkt Süd, which had been relocated to Mühlacker near Pforzheim after the base at Hagenau had been abandoned. During January 1945, a total of thirty Panther tanks and ten Jagdpanther tank destroyers were allocated to the Panzer- Stützpunkt located at Mayen, approximately 20 kilometres west of Koblenz in western Germany. In some official documents this establishment is referred to as Panzer-Stützpunkt J and it was probably intended as a temporary base. The ultimate fate of these vehicles is unknown although they certainly did not take part in the defence of the town. The history of the US 11th Armored Division, which captured Mayen on 8 March 1945, states clearly that the German defences were overcome by dismounted infantry who faced only small arms fire and the occasional Panzerfaust. There is no mention of the American units encountering any German armoured vehicles either at Mayen or in the subsequent fighting for Andernach, some 15 kilometres further to the east.

This Panther ausf D is quite probably one of the seven training tanks of Panzer- Ersatz und Ausbildungs-Abteilung 35 attached to Kampfgruppe Massenebach, later Kampfgruppe Xlll/von Hobe, that took part in the defence of Bamberg. Note the very rough application of Zimmerit paste on the turret, not uncommon on these early Panthers, and the prominent Balkenkreuz. This tank was manufactured sometime prior to August 1943 when the communications port on the left hand side of the turret was dropped from production. This tank is also shown on page 26 of the Camouflage & I Markings section of this book.

PANZER-DIVISION CLAUSEWITZ, APRIL 1945

The last armoured division raised by the German Army during the war, this formation was created by an order dated Wednesday, 4 April 1945, with the stipulation that the division was to be ready for operations by the following Sunday. The division was to be formed from replacement and training units with the anti-tank battalion of Panzergrenadier-Division Grossdeutschland

and elements of325.Infanterie-Division. But the infantry units could not be spared from the front and Panzerjäger-Abteilung Grossdeutschland had lost all its tank destroyers in the fighting in the East and had to be refitted with Sturmgeschütz III assault guns before it could join the division. Panzer-Division Clausewitz was eventually raised from the remnants of various units including Panzer-Division Holstein, anotherformation which was a division in name only, and parts of 233.Reserve-Panzer-Division. But the division's real striking power was concentrated in its two armoured battle groups, shown below. Although these groups lacked transport and a full complement of armoured vehicles, most of the tank crews were combat veterans or instructors. Both underwent several organisational changes and were these have been confirmed I have mentioned them.



Note

---

1. The information regarding the Panthers is somewhat contradictory with one source stating that a further six command tanks, referred to simply as

Panzerbefehlswagen, were on hand although it is unclear how many of these were Panthers. The research of the late Ron Klages, which I would be inclined to defer to, shows that the regimental and battalion headquarters were each equipped with four Befehlspanzer Panthers while the battalion's four companies each had fourteen Panther tanks giving the total of sixty-four.

2. The official order was dated 3 April 1945. The staff and equipment of the Panzertruppen-Schule had been moved from Wunsdorf to Bergen in March 1944 and by October of the same year they had been joined by Panzertruppen-Schule Krampnitz. The Bergen establishment would provide much of the tanks and crews for the formations that were raised in the last weeks of the war.

3. Twenty-three of these tanks were equipped with the Biidwandier (BIWA) infrared sighting equipment and allocated to the battalion's first company which was withdrawn to Fallingbostel to train with the BIWA sights. A further six BIWA Panthers were allocated to l.Kompanie in December 1944.

4. Lauchert was replaced as commander by Oberstleutnant Stenkhoff just two weeks prior to the commencement of Operation Dragoon, the Allied landings in the south of France.

5. Hermann Balck, who commanded Heeresgruppe G from September to December 1944, rated Panzer-Regiment 15 as one of the best units of the German Army and attributed the regiment's ability to keep its tanks going to the efforts of Oberfeldwebel Kurt Reuschel of the maintenance section. Wietersheim, the division commander, credited Major Karl Heinz

Voigtmann, his logistics officer, for keeping all the supply elements just far enough to the rear to be withdrawn in time.

6. Wietersheim, who had led the division through the battles in France and Germany, had been promoted to a command in Berlin and replaced by Buttlar. Feigning illness, he remained with the division and, with the agreement of Buttlar, negotiated its surrender.

7. Twenty-three Panthers, five Pzkpfw IV and fourteen StuG III were in the process of delivery.

8. The other two Sturm- Mörser units formed during the war were both similarly depleted and as production ran to just eighteen vehicles it is difficult to imagine where the four Sturmtigers allocated by OB West came from.

9. As part of 9.Armee the division was caught in the Halbe Pocket, south of Berlin, in May 1945. Although all the heavy equipment was lost many of the men were able to make their way to the West where they surrendered to the Americans

10. The battalion was formed into a composite regiment under Major Josef Rettemeier with Major Vierzig's tanks and the Panthers of Panzer-Lehrgang Erlangen forming the first battalion. This is explained further in the chart on page 11.

11. The Jagdpanthers were most probably the ten vehicles allocated to 2. Kompanie on 10 February 1945, meaning that the Panthers were with the third and fourth companies. Almost nothing is known of the fate of the battalion's tank destroyers and it is assumed that they were lost in the battles for the Remagen bridgehead or in the Ruhr Pocket.

12. The story of II.Abteilung is examined in more detail in Jagdpanther Tank Destroyer: German Army and Waffen-SS Western Europe 1944-1945, the eighth book in this series.

13. The eleven tanks available on 14 December were the Panthers that had been handed over from Panzer-Brigade 107. In addition to the twenty-nine tanks received on 31 December 1944 and 2 January 1945, a single Panther arrived on 13 January.

14. The battalion's

15. Kompanie had left Italy earlier, in September 1944.

16. The abbreviation zbV, or zur besonderen Verwendung, can be translated as special purpose or perhaps more accurately as for special employment.

17. The Luftwaffe also controlled a number of assault gun and tank destroyer units.

18. The exact dates here are not clear and it is possible that Schulze received his orders to form the Kampfgruppe in the last days of March. The division itself had been greatly reduced in strength by March 1945, referred to on the daily OKW situation maps as Kampfgruppe Panzer-Lehr.

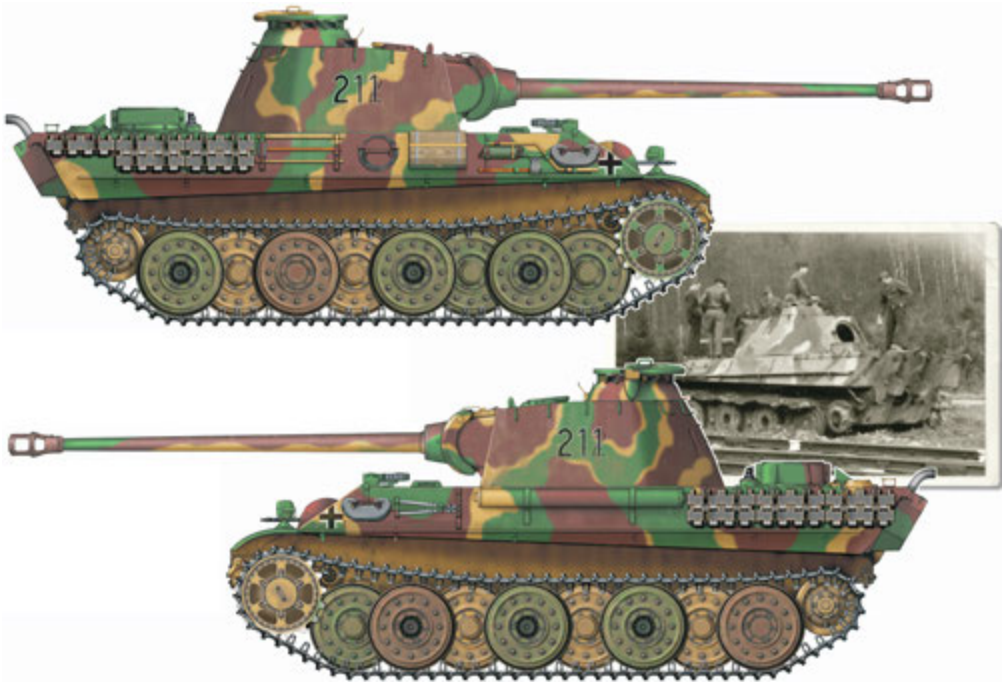
19. As part of Aktion leuthen, the code name for the mobilisation of the army's training establishments, this unit was raised by an order issued by Kommardeur der Panzertruppen, Wehrkreis VI on 28 March 1945 which confirms the numoers given here. The original intention was that the tanks would reinforce Panzer-Lehr und Ausbildungs-Aoteilung Westfalen, another Aktion Leuthen formation, raised from reconnaissance and sniper trainirg units.

20. Throughout the war various stages of the call-up were signalled by these codenames. Aktion Gneisenau was applied to several mobilisations of the replacement army while Aktion Leuthen announced the siphoning-off of training establishment personnel to the field army and was the last such operation conducted during the war.

1. Pzkpfw V Panther ausf G. Panzer-Le hr-Regiment 130. France, autumn 1944. Photographed near Saar-Union on the western edge of the Forêt Vosges, this Pantherwas probably assembled in October and is painted in a variation of one of the factory-applied camouflage schemes introduced in late August and early September 1944. The placement of the Balkenkreuz on the left-hand side rear stowage box in the original photograph on which this profile is based would suggest that this tank was built by Daimler-Benz.

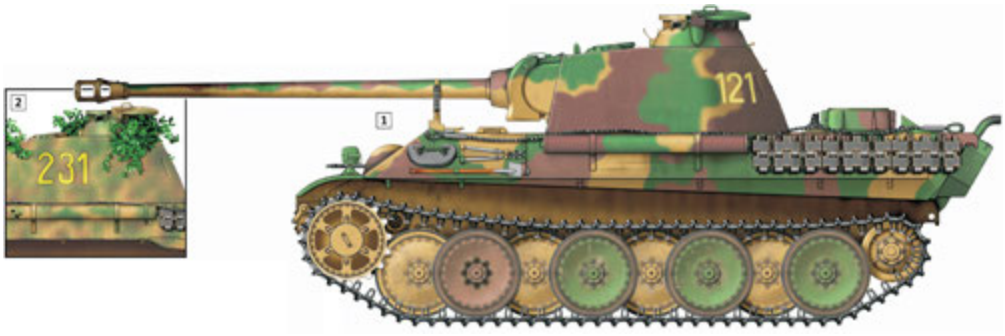
2. Panzer befehlswagen V Panther ausf G. Panzer-Regiment 33. Belgium, winter 1944. This tank was captured by units of the US Army near Wilwerdange in Luxembourg after elements of 9.Panzer-Division conducted an assault there on 25 January 1945. The whitewash

coverage is almost completely worn through showing a factory-applied camouflage pattern (3) indicative of vehicles assembled by MNH. Note the armoured pot or cover on the rear deck (4) which protected the insulator for the Sternantenna D radio aerial, and the aerial extensions housed below the tube for the gun cleaning rods, both identifying features of these command tanks.



Pzkpfw V Panther ausf G. 2.Kompanie, SS-Panzer-Regiment 1. Belgium, winter 1944. Commanded by Untersturmführer Hubert Kaufmann, this tank was disabled near the railway station at Stoumont, south of Liège, on 19 December 1944. It was photographed from several angles allowing us to accurately depict the camouflage scheme which is typical of Panthers assembled by MAN. A very small number of tanks, perhaps as few as twenty-four, were built with the rubber-cushioned steel roadwheels, or Gummigefederten Stahllaufrollen, depicted here. Note that most of the steel wheels have lost their hubcaps. I have assumed that the wheels were painted in a similar fashion to the standard rubber-rimmed versions although they may have been coated in a single colour. Other images of this vehicle

show clearly that the company number has been altered. The photograph at far right shows the later welded exhaust covers.



1. PzkpfwV Panther ausfG. SS-Panzer-Regiment 9. Belgium, winter 1944/45. Assembled by MAN, this is probably one of the Panthers the battalion received from 23 November 1944 onwards when it was rebuilt with four full companies of these tanks. The turret number is usually considered to have been white but it may also have been painted in the pale yellow that this battalion used in Normandy (2).

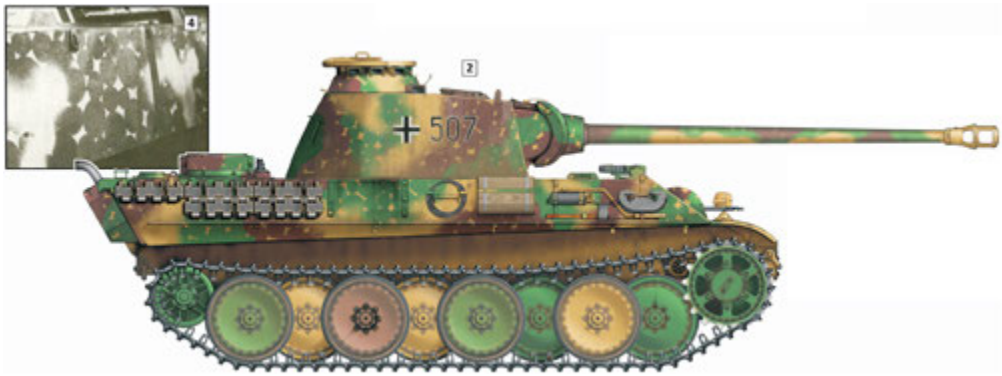
3. Pzkpfw V Panther ausf G. III.Abteilung, Führer-Grenadier-Brigade. Luxembourg, winter 1944/45. Photographed near Eschdorf, just 10 kilometres east of the French border, this tank has been converted to a command vehicle by the addition of extra radios and a field-modified

antenna bracket can be seen on the turret side (4). The tanks of this battalion all seem to have Zimmerit, which was dropped from production in September 1944 but many have the poison gas identification panels introduced in October suggesting they may have been amongthe last Panthers coated with the anti-magnetic mine paste. The complete photograph of this tank is shown on page

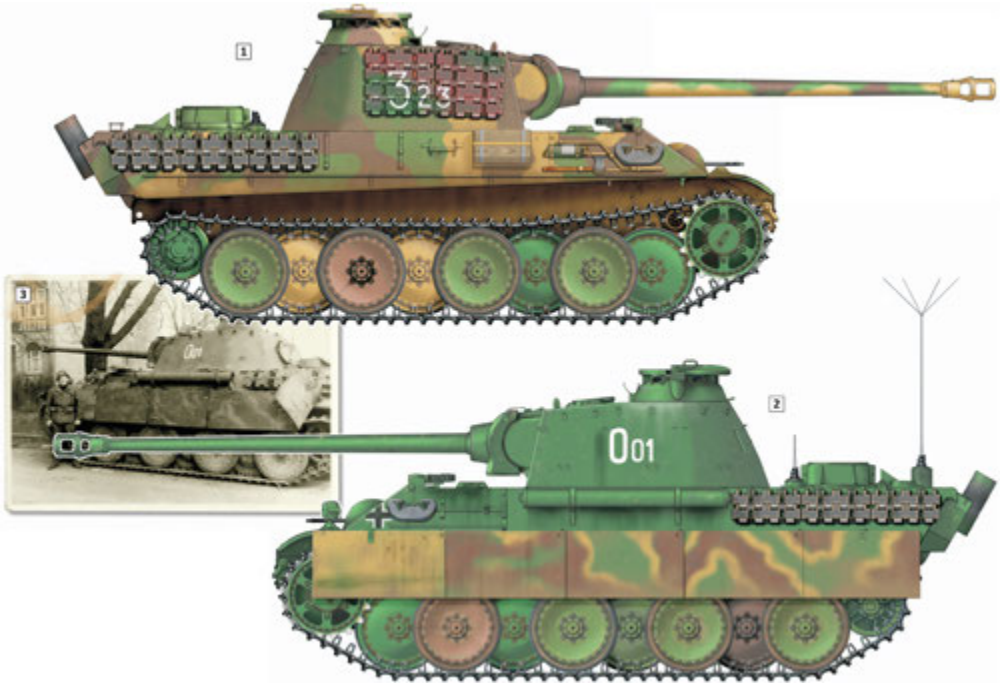
1. Pzkpfw V Panther ausf G. SS-Panzer-Regiment 1. Belgium, winter 1944/45. This tank is painted in the so-called Ambush camouflage scheme which was in use with Daimler-Benz during September 1944. As Zimmerit was discontinued from about the beginning of the second week of the same month, and the total Daimler-Benz production figure for September was just eighty tanks, very few Panthers could have been finished in this pattern. Commanded by Unterscharführer Krüger, this tank was disabled in the fighting around Stoumont on 19 December 1944 and photographed in early 1945. The style of company number, rendered in a white stencilled outline with a black centre, cane be clearly seen in our photograph (2).

3. Panzerbefehlswagen V Panther ausf G. SS-Panzer-Regiment 10. France, winter 1944/45. Photographed nea rKilsett, north-east of Strasbourg, in January 1945 this tank is one of a number the regiment's I.Abteilung lost in the battles for the Gambsheim bridgehead during Operation Nordwind, The batta I ion's first and second companies were equipped with Panthers and turret numbers in the 500 series identified the battalion headquarters. Note the large hooks on the turret sides used to hold lengths of spare track and the armoured pot on the rear deck for the Sternantenna D. The photograph on which this illustration is based shows that unlike most of these purpose-built command tanks, this vehicle appears to have retained the co-axial machine gun and is not fitted with the bracket to hold the radio aerial extensions below the tube for thegun cleaning rods.

1. PzkpfwV Panther ausf G. Panzer-Regiment 3. Germany, winter 1944/45. Although the orders of November and December 1944, detailed on pages 61-2, called for the use of three colours, patterns made up of just two distinct shades are often encountered. This Panther of 2.Panzer-Division was knocked out near Marnach on the German-Luxembourg frontier during the final phase of the Ardennes Offensive and appears to have been painted in a disruptive pattern made up of Olivgrün RAL6003and Rotbraun RAL8017, or possibly the primer RAL8013. Although it has been suggested that this tank may be from Panzer-Regiment 33 of 9.Panzer-Division, both the OKW and US Army situation maps have only 2.Panzer-Division in this area.



2. Pzkpfw V Panther ausf G. SS-Panzer-Regiment 10. France, winter 1944/45. This tank, from the same unit as the vehicle shown on the previous page, is also painted in the so-called disc-pattern camouflage, variations of which were employed by both MAN and MNH shortly after the introduction of factory-applied camouflage. At least four different patterns have been identified from period photographs and the scheme is also seen on Panthers with Zimmerit (3) proving that it was introduced in late August or very early September. The discs are actually in the base colours of Rotbraun and Olivgrün (4) with the lighter, negative shapes applied in Dunkelgelb using a stencil. Over this random patches of Dunkelgelb were sprayed. This tank may be one of the ten allocated to the regiment's I.Abteilung in September 1944.



1. Pzkpfw V Panther ausfG. 3. Kompanie, Panzer-Lehr-Regiment 130. Germany, spring 1945. The application of the turret number in the style shown here, with the company identifier approximately twice the size of the platoon and individual tank numbers, was an Identifying feature of this battalion. The camouflage pattern is typical of Panthers assembled by MAN or Daimler-Benz in September or October 1944. This tank is also shown in the photograph at the bottom of page 14.

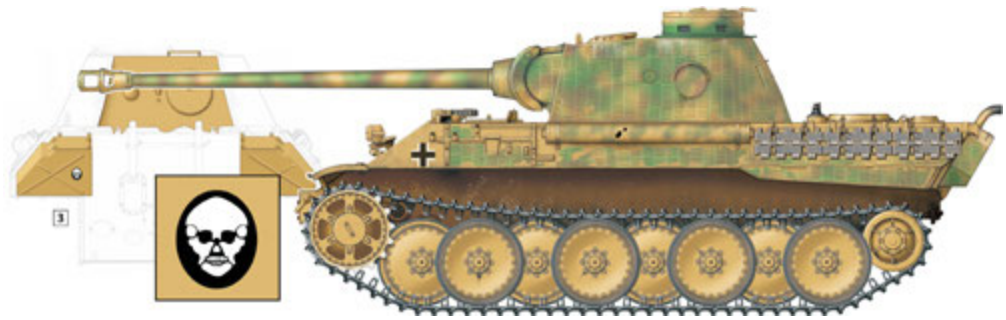
2. Panzerbefehlswagen V Panther ausf G. Stab, Panzer-Lehr-Regiment 130. Germany, spring 1945. This vehicle is a March production Panther, as evidenced by the small metal loops welded to the turret sides, and although it is difficult to be certain it appears that this tank was painted in a single dark colour, here rendered as Olivgrün RAL 6003. Note that the contrast between shades that is apparent on the hull Schürzen (3) is totally lacking on the turret and hull sides. A rear view of this tank is shown in the photograph at the top of page 14

1. Pzkpfw V Panther ausf G. Panzer-Regiment 3. Germany, spring 1945. Photographed near Germersheim in March 1945 the identification is largely based on the OKW situation maps for the month which show 2.Panzer-Division supporting a Kampfgruppe made up from elements of several Voksgrenadier formations defending the town and surrounding area. The striking camouflage pattern is typical of Panthers assembled by MNH at this time and had evolved from the scheme shown on page 19. The Baken kreuz was often, but not always, painted onto the turret sides.

2. Pzkpfw V Panther ausf G. Panzer-Regiment 15. Germany, 1945. This tank provides another example of a late war two-colour camouflage schemeand is one of a number of Panthers assembled by MAN in March or April 1945 with a single steel roadwheel. It is also fitted with the later style cupola, without the metal ring for the anti-aircraft machine-gun, and the small metal loops welded to the turret sides to hold pieces of foliage camouflage. Although almost identical, it is

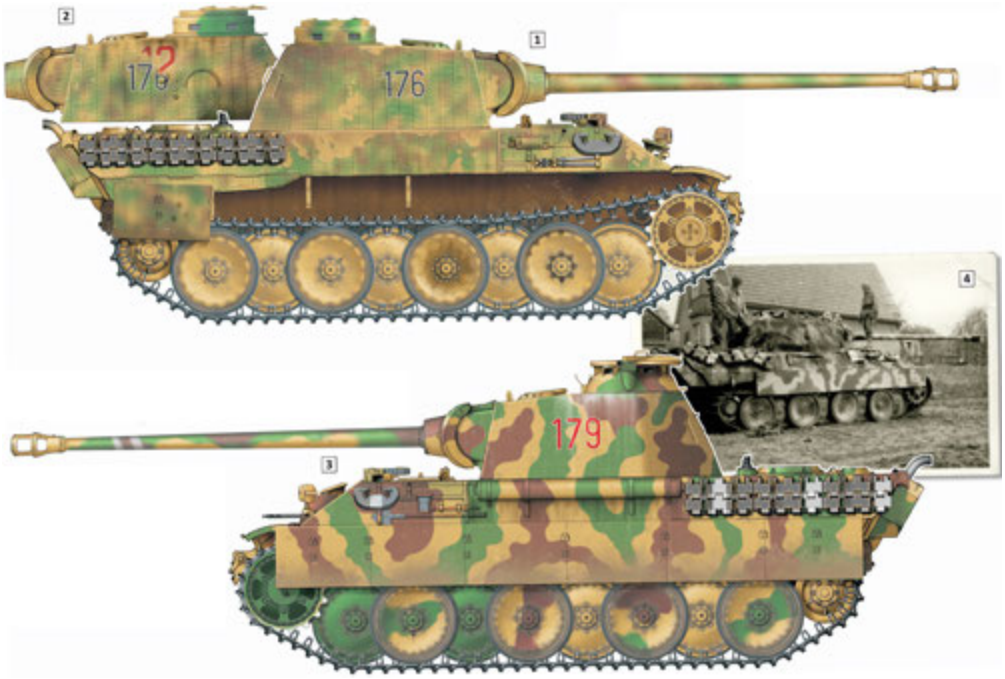
definitely not the tank shown in our photograph (3), as has been suggested elsewhere.

1. Pzkpfw V Panther ausf G. Panzer-Reglment 22. Germany, spring 1945. Photographed in Munich at the end of the war, this tank today resides at the Patton Memorial Museum in the United States. Close examination of the available images suggests that the two darker colours, depicted here as Rotbraun and Olivgrün, are separated by a thin line of a lighter shade, possibly Dunkelgelb {2). Whether this was some kind of guide, the original undercoat or applied for some other reason will probably never be known as the tank was repainted long ago. A piece of colour film exists which shows the left- hand side of the vehicle but it is quite faded and cannot be relied upon although a third colour, possibly RAL 8013, is evident.



2. Pzkpfw V Panther ausf D. Panzer-Ersatz-und Ausbildungs-Abteilung 35. Germany, spring 1945. This training and replacement

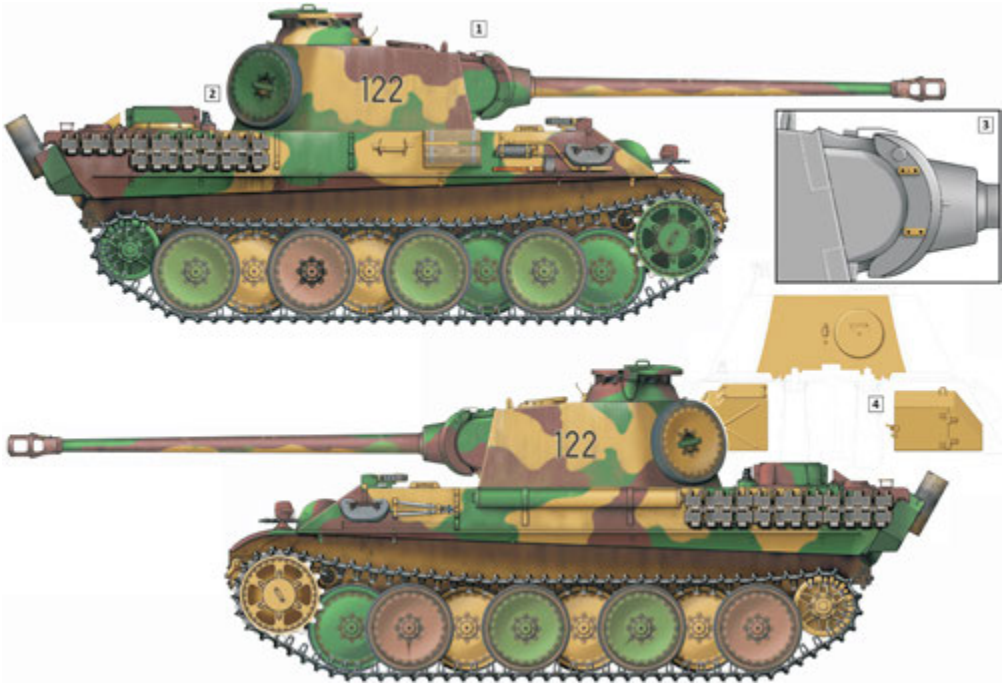
unit provided a number of tanks to Kampfgruppe Massenbach, later Kampfgruppe Xlll/von Hobe, and took part in the defence of Bamberg on the Main river north of Nuremberg. Some tanks carried the Balkenkreuz national insignia and other images of this vehicle show the small Totenkopf badge, probably in white on a black background, painted onto the rea r stowage box (3).



1. Pzkpfw V Panther ausf D. Kampfgruppe Bennigsen. Germany, spring 1945. This elderly training vehicle is one of the tanks of Scheiss-Schule Putlos which were seconded to Panzer-Division Clausewitz in April 1945. The style of company number, which was repeated on the turret rear, was common to most of these tanks. Of note are the early roadwheels, with their sixteen reinforcing bolts, and very worn coating of Zimmerit which has been chipped away on the left-hand side to reveal an earlier number (2).

3. Pzkpfw V Panther ausf A. Kampfgruppe Bennigsen. Germany, spring 1945. Photographed near Fallersleben, north-east of Brunswick, in April 1945 this vehicle is another of the tanks handed over from the

tank gunnery school at Putlosand attached to Majorvon Bennigsen's Kampfgruppe, part of Panzer-Division Clausewitz. I can offer no explanation as to why parts of the tools and spare tracks should be painted white but is quite clear in more than one image of this tank (4), as is the elaborate camouflage pattern. I have depicted the turret number here as red with a white outline as it does appear lighter that the tank shown above in the available photograph. However, it is entirely possible that the centre is black or anther dark colour.



1. Pzkpfw V Panther ausf A. Panzer-Division Clausewitz. Germany, spring 1945. Judging from the late production features this vehicle may have been one of the Panthers handed over to the division from Panzer-Abteilung 2108 which appear to have retained their original turret numbers. The method of attaching the spare wheels (2), on the turret side towards the rear, is also not seen on the vehicles from Scheiss-Schule Putlos. Many of the division's Panthers, perhaps all the ausf G models, were fitted with the attachments and mounting brackets (3) for the Bildwandler infrared sighting equipment, including the special rear stowage box (4), although it is almost certain that none were equipped

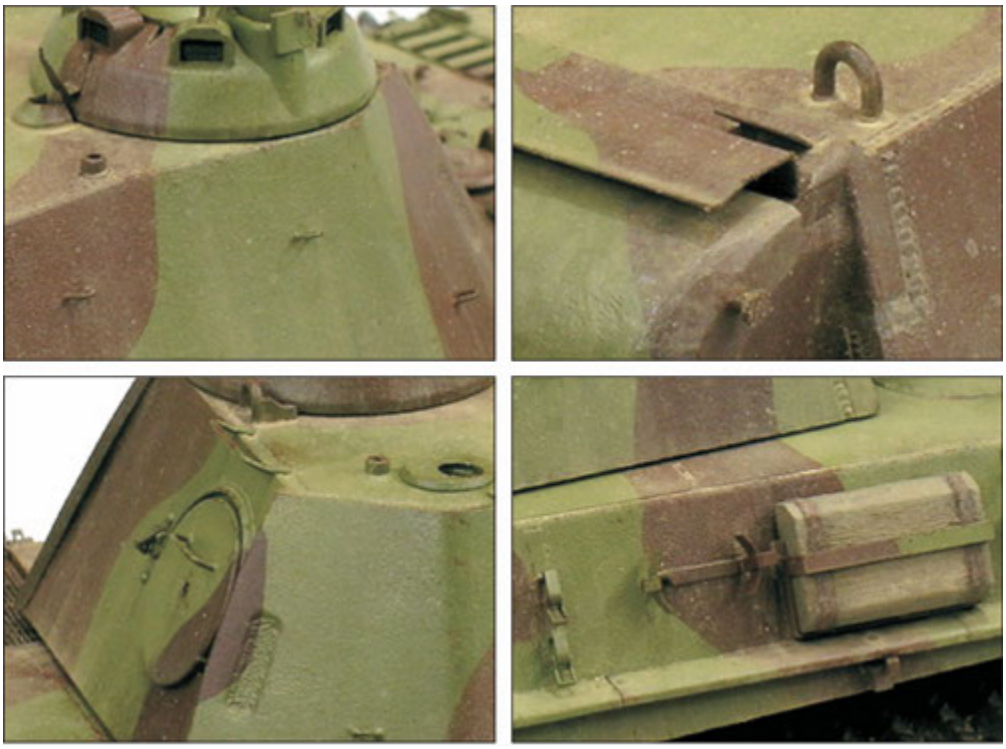
with the actual sights. Abandoned in relatively good condition, this vehicle was photographed from several angles allowing an accurate representation of the camouflage scheme and is also shown on page 49.

PZKPFW V PANTHER AUSF G

GERMANY, APRIL 1945

1/35 SCALE SHENG HUI

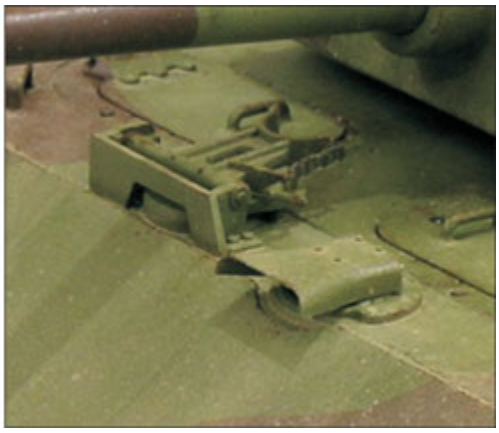
The work of Chinese modeller Sheng Hui will be familiar to many readers of this series. Typical of much of his work, this model is finished in a rather basic camouflage scheme which highlights the incredible amount of detail that he is able to incorporate into the build. Many parts of Sheng Hui's models, such as the fenders, mantlet rain guard and tool racks, are in fact produced by his own company, ROCHM Model.



Detail shots of the finished model including the small metal loops welded to the turret sides, the mantlet rain guard and bracket for the poison gas detection panels, the rear access hatch and the jack block. These features are explained in the Technical Details and Modifications section of this book. ROCHM Model has recently embarked on an ambitious programme to produce resin and brass detail sets for every production phase of the Panther.

Above, left: The last pattern commander's cupola without the anti-aircraft machine gun ring which had previously been welded to the periscope guards.

At right: The crew compartment heater.



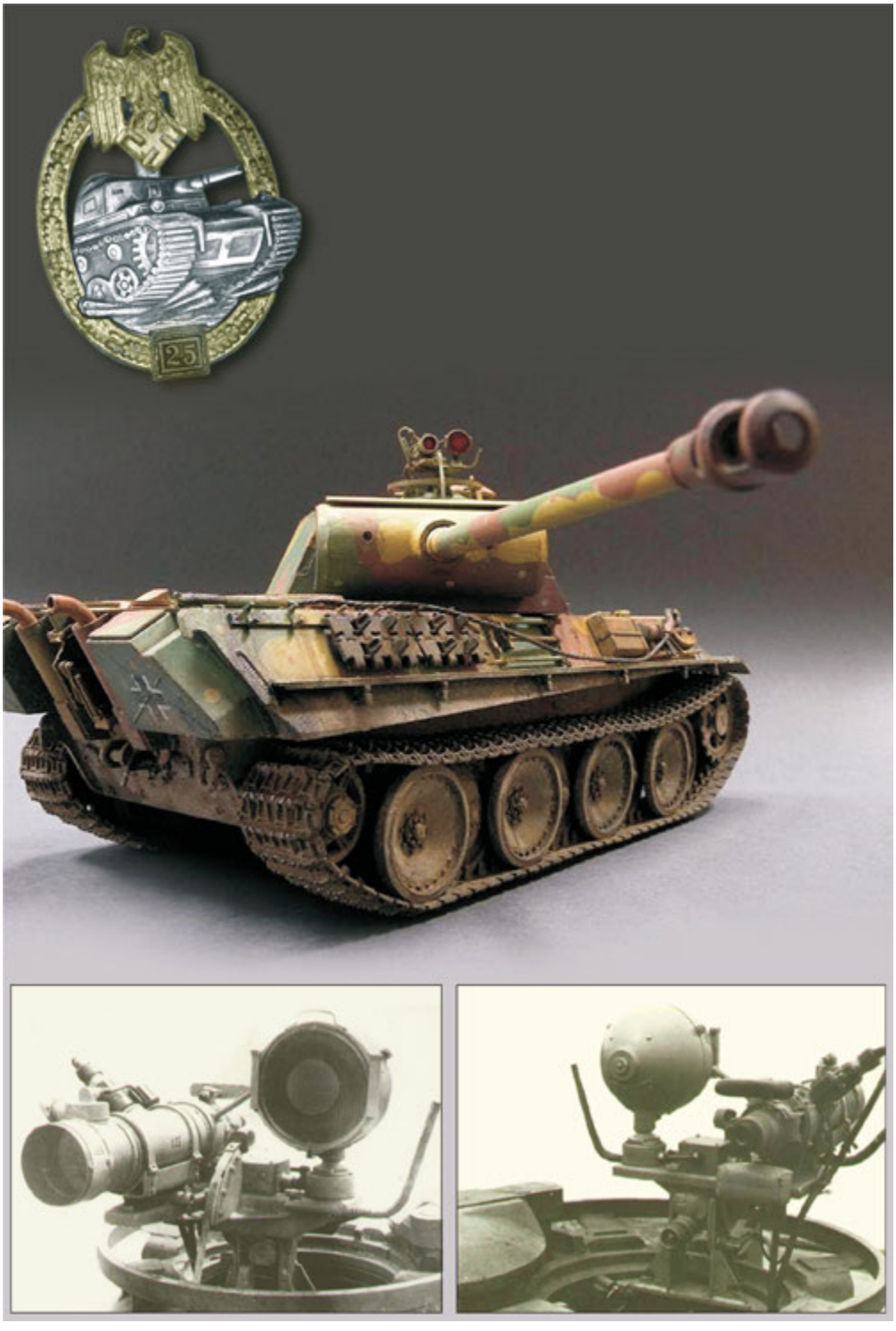
Below, left: The Bosch headlightfitted to the left side fender and connecting wire.

Right: The rain guard for the driver's periscope and gun travel lock.

PZKPFW V PANTHER AUSF G

NIGHT FIGHTER GERMANY, APRIL 1945

1/35 SCALE LIM KIAN GUAN


25

Singaporean modeller Lim Kian Guan's replica is based on the Tamiya 1/35 scale kit, and is finished in one of the factory-applied camouflage schemes. The Bildwandler (BIWA) FG 1250 infrared sight, fitted to the commander's cupola, was one of the night-fighting solutions developed during the war. Lim has added a number of small details to the sight and also the hull including the towing cables, brackets and engine grills. The photographs at the bottom of the previous page show an example of the FG 1250sight captured at the end of the war.

PZKPFW V PANTHER AUSF G

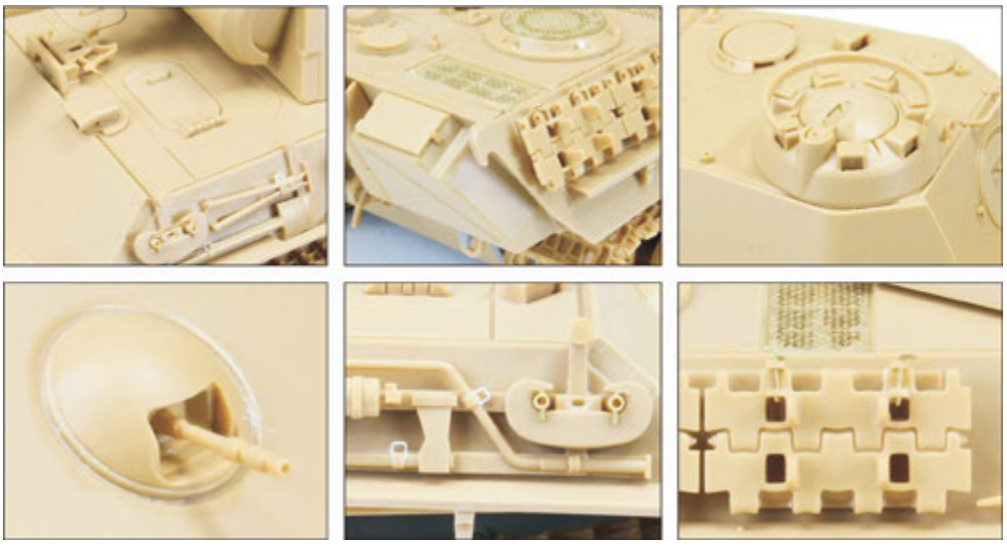
LATE PRODUCTION

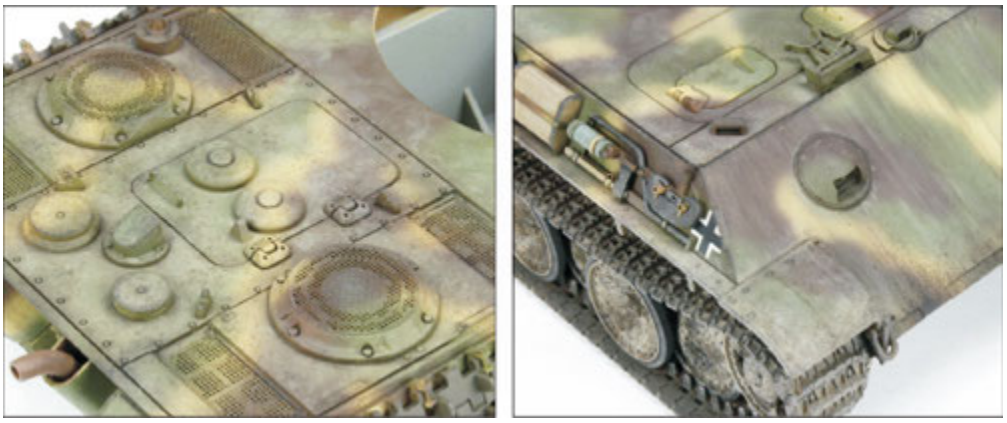
1/48 SCALE LUCIANO RODRIGUEZ

Panther-Fibel

Luciano's model is based on the Tamyia 1/48 scale kit, built almost straight from the box, except for the small details.

The engine grills are photo-etched brass from Hauler but the handles, track fixtures and tool bracket buckles were all made from metal rod or plastic card.

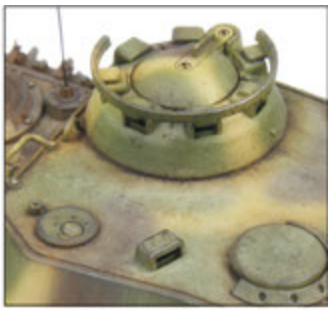




AK
RC047
AK
RC068
AK

Once the building phase was complete, the model was sprayed with AK Real Color Olivgrün and Rotbraun over a based coat of Tamiya XF63 Dark Yellow. The details, such as the tools and fire extinguisher, were finished with Vallejo Panzer Aces acrylics.

After the camouflage colours had been applied, the model was weathered with Tamiya Enamels and Mr. Hobby Weathering paints, which are marketed under the Mr. Colour label.



121

121

Further views of the completed Panther. The extensive yet realistic weathering is particularly effective on the lower parts of the vehicle such the rear hull, fenders and wheels

In 1961, Tamiya and Airfix both released their first plastic models of the Panther, in 1/35 and 1/76 scale respectively, and replicas of this large powerful tank have been a favourite with modellers ever since. Though these early kits could be generously described as basic, they were affordable and readily available, and created the market and demand which eventually led to the highly detailed products of today. Incredibly the Airfix kit is still on the market although the Tamiya model has long since been superseded by more detailed and accurate representations.

This century has seen a boom in the plastic model industry and kits of the Panther are currently available in a bewildering range of sizes from tiny 1/285 scale wargames tanks to massive 1/6 scale radio-controlled vehicles. Consequently there are far too many to list here individually and, as with the other books in this series, I have chosen to concentrate on the most popular modelling scales of 1/35 and 1/48, although I have endeavoured to include some of the smaller scale models. Many kits or accessories related to the initial production models were included in an earlier title in this series Panther Tanks: German Army and Waffen-SS Normandy Campaign 1944 and to some extent in Jagdpanther Tank Destroyer: German Army and Waffen-SS Western Europe 1944-1945 and I have tried to avoid any repetition here, choosing to concentrate on the later versions.

In addition, many manufacturers regularly withdraw products from their catalogues, often only for them to be repackaged and re-released at some later date, and I have tried to include models which are readily available at the time of writing. Finally, the reader should note that for this chapter I have used the word Type in place of the more correct Ausführung, as at least one major manufacturer does, as a matter of convenience.

An index of manufacturers, together with suggestions for further reading, can be found on page 64 of this book.

TAMIYA INC

In 1959, after some success with wooden models, this Japanese company switched to injection moulded plastic and in 1961 released its first armoured vehicle kit, a Panther.

By the early 1970s Tamiya was producing a large range of armoured vehicles, with complementary figures and accessories, and was almost solely responsible for the rise in popularity of 1/35 scale. Although rudimentary by today's standards, these kits were highly accurate and detailed when compared to what was available at the time. Importantly, they were all made to the same scale, a concept which the early British manufacturers had pioneered, which encouraged modellers to build a collection. The company's near monopoly of the 1/35 scale market remained unchallenged until the release of the first Dragon Models kits in 1987. In 2003 Tamiya began releasing a series of models in 1/48 scale and this line has been extremely successful for the company, combining the potential for a high level of detail without the expense of the bigger kits. The sole 1/48 scale offering at the time of writing is a later Type G which lacks the Zimmerit texture dropped from production in September 1944. Tamiya also offers radio-controlled models of a Type G in 1/35 and 1/16 scale.

Tamiya's 1/48 scale Panther Type G. This kit comes with optional parts including an early and later gun mantlet with the prominent chin, Flammenvernichter exhaust mufflers and raised crew compartment heater.

DRAGON MODELS LTD

Dragon Models was one of the first of the major manufacturers to offer accurate replicas in 1/35 scale and their kits are today something of a benchmark. The company's small scale releases are some of the best available. At the time of writing this Hong Kong-based company offered seven construction kits in both 1/35 and 1/72 scale representing variants of the Panther tanks that served in the North-west European campaign including a Type D, a Type A and an early Type G, all with Zimmerit texture. Also produced in 1/35 scale are a later Type G and a Befehlspanther Type G. The smaller scale kit of the early Type G includes a number of well detailed and anatomically correct crew figures. In addition to these, Dragon

produces a pre-painted early Type G in 1/72 scale although the model lacks Zimmerit and is finished in markings that are somewhat dubious.

Examples of Dragon Model's box art for which the company is rightly famous. The images shown here were all created by the great Ron Volstad.

Dragon's latest release, a 1/35 scale late production Panther Type G with optional anti-aircraft armour in photo-etched brass. The images at the bottom of the page are all details of this kit.

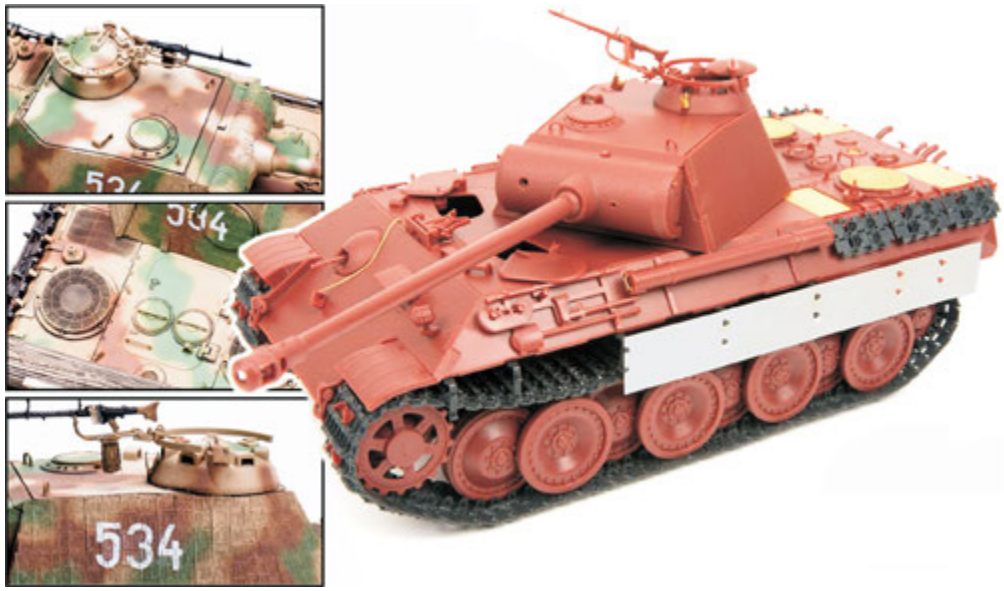
TAKOM

This is one of the newest model manufacturers, setting up shop in Hong Kong in 2013 as Takom World and shortly afterwards expanding to open a plant in mainland China where the models are actually produced. Most kits are in 1/35 scale and the company offers models of the early, mid and late production versions of the Panther Type A and Panther Type D models both with and without Zimmerit. All these models have detailed interiors and come with optional transparent parts for the hull and turret. Takom also produces two Bergepanther kits in 1/35 scale.

Above: Takom's 1/35 scale PantherType A with the detailed engine and commander's cupola. At right: The company's Panther Type D kits.

MENG-MODEL

Founded in 2011, this Chinese company largely specialises in modern armour but also produces a number of Second World War subjects including a Panther ausf A and Panther Type D, the latter with and without Zimmerit. The box of the Panther Type D also carries the logo of the Bovington Tank Museum, implying their cooperation, although I have been unable to confirm this. I should mention that a visit to the company's web site, as with many Chinese model manufacturers, can be an exercise in frustration with the products listed here under the names of various dinosaurs.



Meng-Model's 1/35 scale Panther Type A kit. The built and painted model represents a tank of SS-Panzer-Regiment5.

RYE FIELD MODELS

Based in Hong Kong, this company released its first armour models, three kits depicting Tiger I variants, all in the short space of time between September 2015 and February 2016. The company also offers a Panther Type D and a Panther Type G which has only recently been released. These are highly accurate and detailed kits and both can be built as early or late production vehicles. The Panther Type G contains over 1,500 parts including individual track links and track pins, photo-etched brass details and clear plastic parts to allow the detailed interior to be viewed.

The 1/35 scale Rye Field Models' Panther Type G kit built with clear plastic parts. Many reviewers have claimed this to be the most accurate and detailed model of this tank on the market.

AMUSING HOBBY

This Japanese company specialises in armoured vehicles which were either built as a few prototypes or never left the drawing board. The Panther II project was discontinued with the introduction of the Panther Type G and although a Panther II hull and suspension was captured at the end of the war and shipped to the United States, where it resides today, it is in fact fitted with a March or April 1945 production Panther turret. Strictly speaking the models from Amusing Hobby are not covered by the remit of this study but they are highly detailed and very attractive kits which will appeal to many modellers and I have included the two versions of the Panther II here. The major difference between the two models is the armament, with either the 8.8cm or 12.8cm offered, and the markings.

At right: Amusing Hobby's 1/35 scale Panther II with 8.8cm gun built straight from the box.

Below: The artwork for both Panther II kits offered by the company.

TRUMPETER/HOBBY BOSS

Often thought to be separate entities, these Chinese companies are in fact owned by the same corporation, are located at the same address and are essentially the same firm although different models are marketed separately under the two labels. Hobby Boss produces a 1/16 scale early production Panther Type G, which actually depicts a tank assembled in September or October 1944, and a Panther Type A with Zimmerit in 1/35 scale. The 1/35 scale Panther Type D Flak Bergepanther model utilised the hull and suspension of the Panther Type A kit fitted with a 3.7cm gun.

At right: The 1/35 scale Panther Type A from Hobby Boss. This kit has an operational suspension and can be built with the drum- type commander's cupola.

Below: Details of the Trumpeter 1/16 scale Panther Type G model built as a Befehlspanzer.

ACADEMY

Based in Korea, this company's Military Miniatures range of 1/35 scale figures and vehicles includes an early Panther Type D model in 1/35 scale depicting one of the tanks used in Operation Citadel. Just released as this book was being prepared was a Panther Type G last production version in 1/35 scale. Some of the marking options supplied with this latter model represent tanks shown in the Camouflage & Markings section of this book. The 1/25 scale Panther Type A, first released in 1985 and re-boxed many times since, is no longer listed in the company's catalogue.

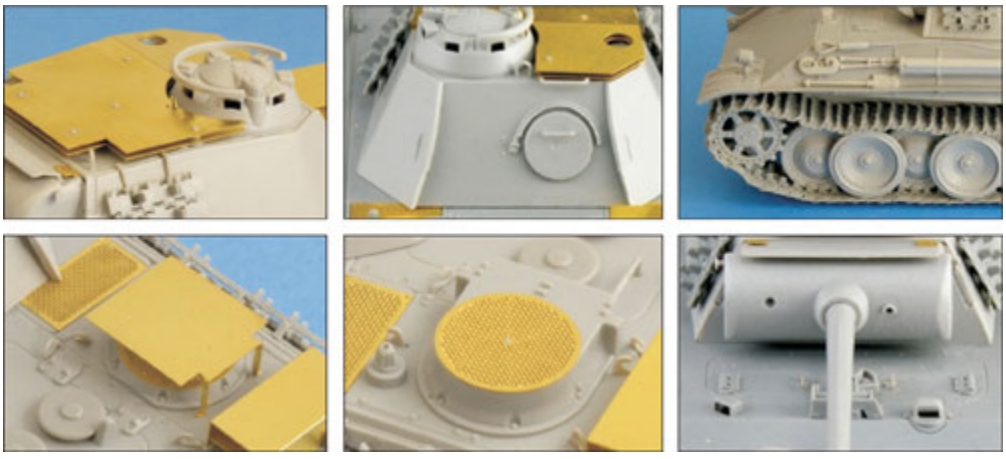
At left: Details of the 1/35 scale Panther Type G last production kit and the Panther Type D model.

Abow: Academy's 1/35 scale Panther Type G last production model built straight from the box.

ITALERI

This Italian company has been producing plastic models since its foundation in 1962. At present the catalogue contains a Panther Type G, a later model, a Panther Type D and a Panther Type A in 1/35 scale. In 1/72 scale Italeri produces a Panther Type G in their Fast Assembly range, the kit containing two models comprising just ten pieces each. The old ESCI Panther Type A kit in 1/72 scale, which Italeri produced for some time, is no long featured in the company's catalogue. Alone among the large model manufacturers Italeri has ventured into 1/56 scale with a Panther Type A kit. This scale complements 28mm wargames figures of which there are now quite a number on the market.

Italeri's 1/56 scale Panther Type A. The images below all show details from the 1/35 scale Panther ausfG kit.



REVELL AND AIRFIX

No list of scale model Panther tanks would be complete without at least some mention of Airfix. The company's 1/76 scale Panther, a Type G model, was first released in 1961 and although the box art may have been altered over the years, the kit itself remains unchanged. Like Airfix, Revell has gone through many changes of ownership over the years since its founding, at one time operating as two distinct entities in the USA and Germany. The company's current catalogue shows the 1/72 Panther Type G and Panther Type A shown here at 1 and 2. Although these are both good kits, readers should be aware that the commander's cupola should have seven periscopes and not six, an inexplicable error in otherwise accurate models. The 1/35 scale Panther Type D (1) is a re-boxing of the ICM kit. Our example has been completed with the upgrade set from Voyager Model.

EDUARD MODEL ACCESSORIES

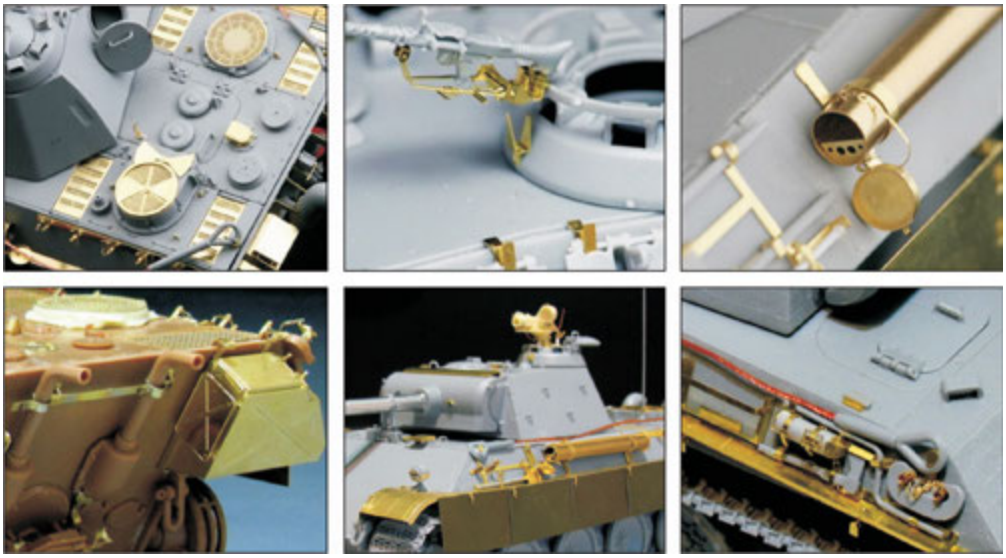
Founded in 1989 this Czech company produces high quality upgrade kits in photo-etched metal and resin and a number of scale models. Currently available are extensive photo-etched detail sets to update the newly released Tamiya Panther Type D, including sets of Zimmerit produced in the patterns typical of MAN and MNH manufactured vehicles, the Zvezda Type D and the Dragon Type D, Type G and late Type A. The company also offers vinyl masks to aid with painting the roadwheels. At the time of writing all the 1/48 and 1/72 scale sets for the Panther had been discontinued. The recently

released Type G kit from Tamiya includes a photoetched Zimmerit set from Eduard.

Eduard Model Accessories photo-etched upgrade set for the later production Panther Type G with parts in resin for the infrared night-fighting sights in 1/35 scale.

VOYAGER MODEL

Based in Shanghai, Voyager Model have been manufacturing upgrade sets for scale models since 2003 with the release of their first set for 1/35 scale armour. The company produces a number of items in both 1/72 and 1/35 scale in photo-etched brass and also resin including wheel hubs, damaged road wheels and ammunition crates and boxes. In addition Voyager also offers highly detailed and accurate milled aluminium and brass barrels and muzzle brakes. Although most of these details would be compatible with almost all manufacturers models some sets are marketed as appropriate for the specific kits from Tamiya, Dragon, Zvezda and ICM.

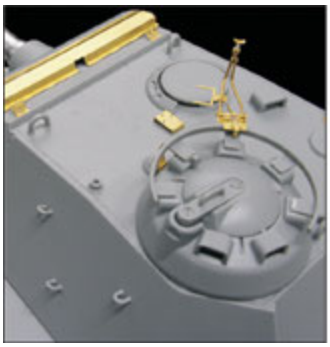


ROYAL MODEL

This Italian company has been producing high- quality accessories and aftermarket parts since the early 1990s under the guidance of its founder, Roberto Reale. The catalogue includes complete upgrade sets in photo-etched brass and resin for both the Dragon early and late Type A, the Tamiya Type G and the Italeri Type A, all in 1/35 scale. Royal Model also offers photo-etched brass hull Schürzen for the Type A and Type G which are appropriate for all 1/35 scale kits. Other 1/35 scale items include two interior detail sets for the Type A and photo-etched Zimmerit for the Type A, either factory fresh or damaged. More generic parts in resin and brass are an engine transmission, detailed rear stowage bins, engine grills and a Kugelblende machine gun mount.

LION ROAR

Based in Shanghai, Lion Roar produce a range of high quality detail sets for plastic model kits. Their catalogue at the present time includes a complete update set in photo-etched brass for the Dragon Models Panther Type G, details of which are shown below. The company also offers anumber of generic details such as tow cables, tools and assorted stowage.



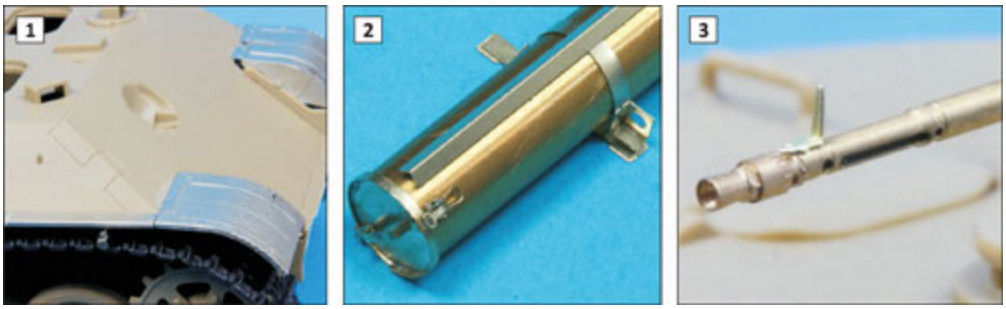
GRIFFON MODEL

Based in China this company produces a large range of photo-etched brass sets for the Panther and Jagdpanther in 1/35 scale to fit most manufacturers' kits, although they do recommend Tamiya and Dragon. All the photographs

reproduced here show details of the upgrade sets for the Dragon Models Panther Type G kits of the early and later versions.

ABER

This Polish company has been manufacturing and selling upgrade sets since 1995, working in photoetched brass, milled aluminium, stainless steel and even wood. For some time now Tamiya has included a number of Aber products with their models. A full list of the accessories made specifically for the Panther in all scales would be far too large to reproduce on this page, particularly in light of the company's regular new releases and the reader can find the company's contact details on page 64. The images shown here, are: 1. Parts of the hull side fender and front mudguard set for a Panther Type G. Note the small bracket to hold the Schurzen in place 2. The tube used to house the gun cleaning rods for a Panther Type G. 3. The barrel for the hull MG 34. All items are in 1 /35 scale.



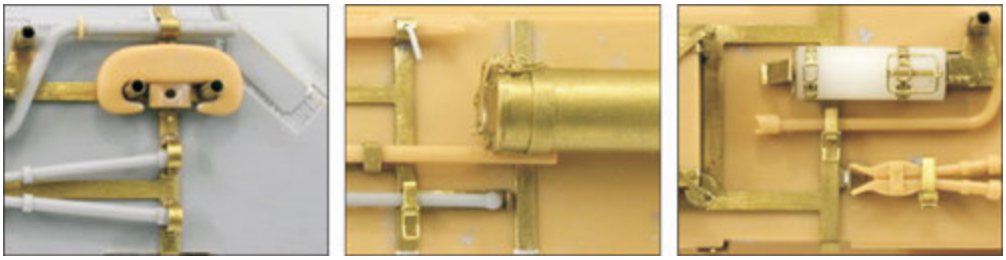
BLACK DOG

Based in the Czech Republic this company produces a large range of detailed resin accessoiy and upgrade sets for armoured vehicles in 1/35, 1/48 and 1/72 scale and a small number of complete kits. They do, however, only offer a small Number of items for the Panther and all in 1/72 scale. Shown below, are: 1. The photo-etched brass set for the Dragon Panther Type D. 2. A corrected turret for the Panther TypeG. 3. Ammunition crates and shells for the 7.5cm main gun.

ROCHM MODEL

This company is owned and managed by master modeller Sheng Hui whose work has appeared in a number of books in the TankCraft series, including this volume.

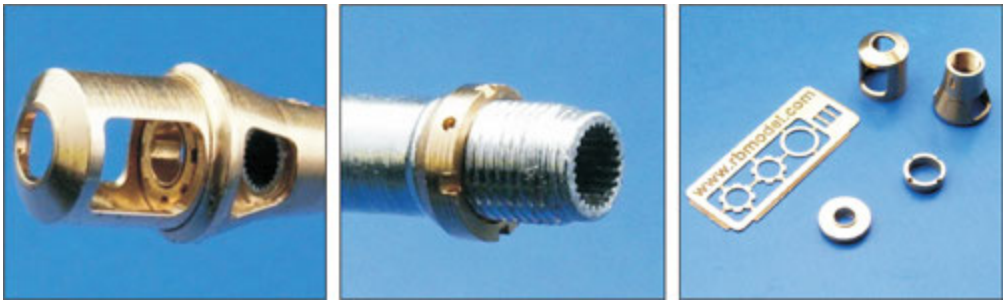
Initially specialising in 1/35 scale detail sets in resin, photo-etched brass and aluminium for the Tiger I, the company moved onto the Tiger II series and then the Panther currently offering forty-five different upgrade sets as part of a program titled Evolution of the Panther which is intended to continue into the very last production models. Primarily intended for the Meng, Dragon and Zvezda models, many of the parts would of course be suitable for most 1/35 scale kits. Rochm Model's products offer exceptional detail and considering the quality, are reasonably priced. Detail sets in 1/48 and 1/72 scale are currently in the planning stage.



A selection of resin and photo-etched brass details including tool clamps, afire extinguisher and gun cleaning rod housing for early and mid-production Panther Type A tanks in 1/35 scale.

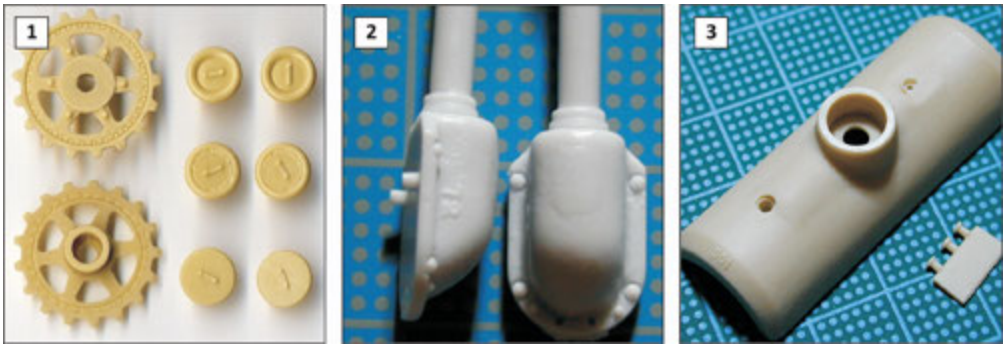
RB MODEL

RB Model from Poland produce a range of milled aluminium and brass gun barrels and resin accessories for 1/72, 1/48 and 1/35 scale armour models. Shown below is the beautifully detailed 1/35 scale barrel and muzzle brake for the 7.5cm KwK 42 L/40 gun which armed the Panther. More generic items include highly detailed towing shackles, radio antenna insulators and fuel drums.



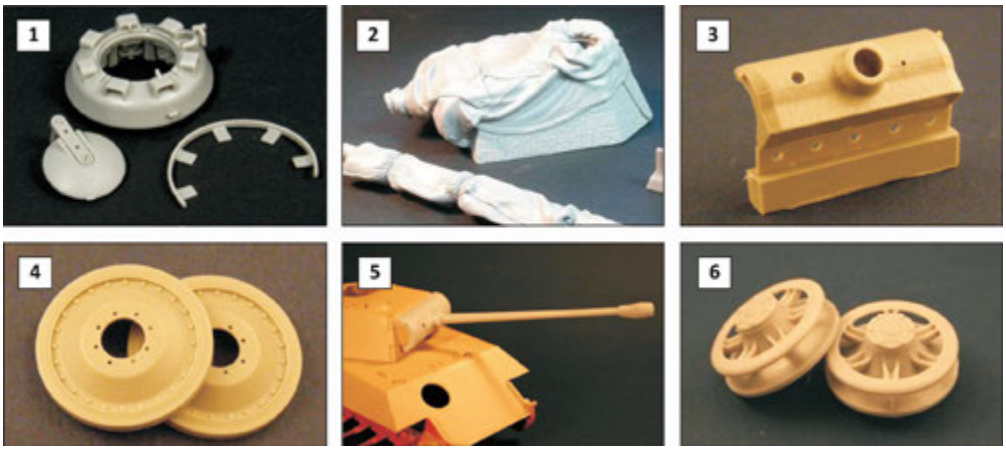
MODEL ARTISAN MORI

This small Japanese company produces resin upgrade parts for 1/35 scale armour models including detailed commander's cupolas and Shown below, are: 1. The Panther drive sprocket stowage boxes for the infrared sight equipment for The early cast the Panther. They also produce more general items such as crew uniforms and tool sets, including fire extinguishers, tow shackles and bolt cutters, with a selection of hub caps. 2. armoured exhaust covers. 3. The gun mantlet.



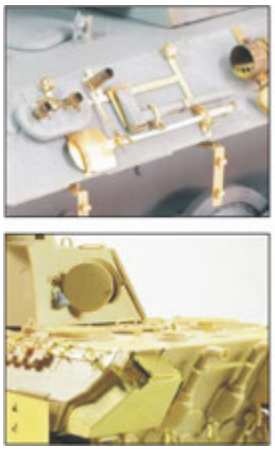
PANZER ART

Based in Poland, this company produces a large range of resin parts for Second World War and modem era armoured vehicles in 1/35 scale, Shown here, are: 1. The cast commander's cupola 2. Zeltbahn covering for the turret and gun, complete with Zimmerit coated turret. 3. Later chin mantlet. 4. Spare roadwheels 5. Canvas muzzle brake cover. 6. Self-cleaning rear idler.



E.T. MODEL

E.T. Model, a relatively new manufacturer from China, produces upgrade sets in 1/72 and 1/35 scale in brass and resin. Shown above, from left to right, are the etched-brass sets to fit the Dragon 1/35 scale Panther Type D, the 1/35 scale set for the recently released Tamiya Panther Type D, and a highly comprehensive set in photo-etched brass for the Dragon Models early Panther Type G in 1/72 scale. Most sets are specifically designed, according to the company, to fit Dragon or Tamiya kits but some, for example the stowage bin, are referred to as universal.

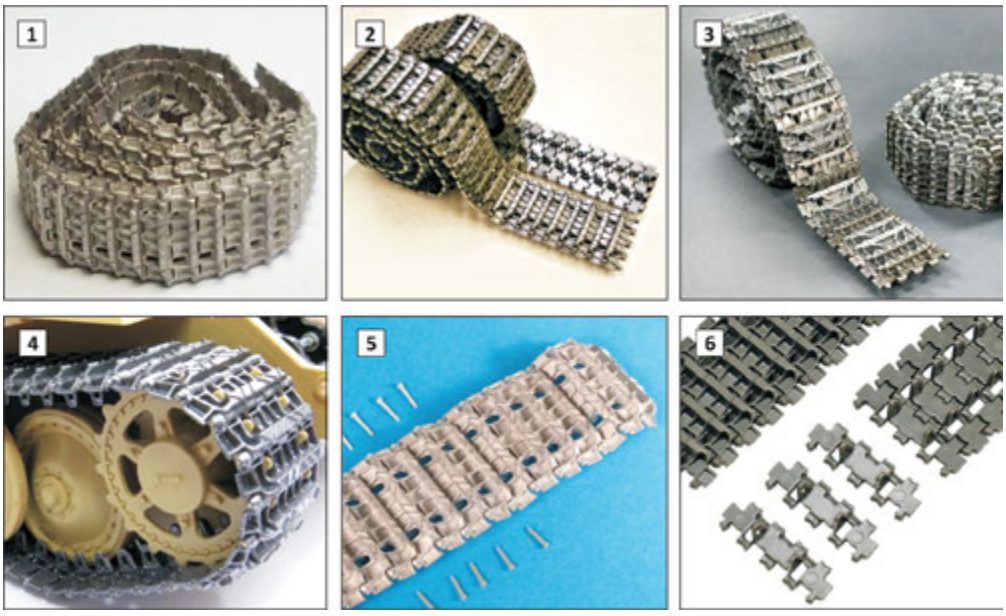


Above: Parts from the 1/35 scale detail set for the Panther Type A and below that the Panther Type D.

Below: The E.T. Model upgrade set applied to the Dragon 1/72 scale Panther Type G.

AFTERMARKET TRACKS

Most plastic kits today contain realistic tracks made from a form of vinyl which, unlike the older types, can be glued together or hard plastic individual links. Nevertheless, there are many modellers who wish for the highest level of detail and realism possible and consequently the number of quality aftermarket products available seems to have increased in recent years, despite the extra expense and work required. In order to operate properly, motorised models require workable tracks made up from individual links held together by pins, as were the full size items.



Friulmodel metal 1/35 scale late model Panther tracks. 2. DKLM RC1/16 scale tracks for the Tamiya motorised kit. 3. Taigen 1/16 scale workable metal tracks. 4. Kaizen plastic 1/35 scale Panther and Jagdpanther late type Kgs 64/560/150 workable tracks available from MS Models, Japan. 5. MasterClub 1/35 scale late Panther tracks. 6. Tamiya's 1/35 scale workable Panther tracks in plastic.

SS-Panzer-Regiment 1. Formed in October 1942, the regiment was attached to l.SS-Panzer-Division Leibstandarte SS Adolf Hitler (1). The first battalion was converted to the Panther in May 1943 and served in Russia and Normandy where it was largely destroyed. Reformed in September 1944 the regiment contained a single battalion made up of two companies of Panthers and two companies of Pzkpfw IV tanks. The regiment famously took part in the Ardennes Offensive as part of Kampfgruppe Peiper with forty-two Panthers on hand.

On 10 January 1945, the division was withdrawn to the area east of St Vith and then to Cologne where the regiment's first battalion received eighteen new Panthers. In February 1945 the division was transferred to the East.

SS-Panzer-Regiment 2. Raised in October 1942 and attached to 2.SS-Panzer-Division Das Reich, the regiment's I. Abteilung was withdrawn from the front and sent to Germany in May 1943 to beginning training on the Panther tank. Greatly under strength, the regiment served in Normandy and took part in the fighting around St Lo, at Mortain and in the attemptedrelief of the Falaise Pocket.

The regiment was rebuilt in November 1944 with I.Abteilung made up of four companies equipped with the Panther while II.Abteilung were allocated two companies of Pzkpfw IV tanks and two companies of Sturmgeschütz III assault guns. The division took part in the Ardennes Offensive, initially as part of the 5. Panzerarmee reserve with 9.SS-Panzer-Division, and was later engaged in the heavy fighting around Baraque de Fraiture, north of Houffalize, at Grandmeril and near St. Vith. Just prior to the beginning of the offensive the regiment reported that fifty-eight Panthers and twenty-eight Pzkpfw IV tanks were on hand. On 17 January 1945, with the offensive completely stalled, the division was pulled back to

the town of Prüm, behind the Westwall defences, and in February, transferred to the East as part of ILSS-Panzerkorps.

SS-Panzer-Regiment 9. Formed in February 1943, the regiment was attached to 9.SS-Panzer-Division Hohenstaufen. The regiment's I.Abteilung began its conversion to the Panther in October 1943 and returned to the division in time to take part in the fighting in Normandy, including the costly battle for Mont Ormel.

The division famously took part in the defence of Arnhem in September 1944 and the Panther tanks associated with SS-Panzer-Regiment 10 in some accounts were almost certainly operated by SS- Panzer-Regiment 9, although their origin is even more clouded by debate. The regiment was rebuilt in November 1944 with first battalion consisting of four companies equipped with the Panther while the second battalion was made up of two companies of Pzkpfw IV tanks and two companies of Sturmgeschütz III assault guns. The division took part in the Ardennes Offensive as part of 6.Panzerarmee and fought in the battles to take Losheim and St Vith and later supported elements of Kampfgruppe Peiper in the attacks on La Gleize. This action marked the high-water mark of the assault and by 6 January 1945 the division was being pushed back from the area around Bastogne and by the end of the month had been withdrawn from the front line.

Photographed at La Gleize, east ofStoumont, in late December 1944, this Panther ausf G of 2.Kompanie, SS-Panzer-Regiment 1 was commanded by Hauptscharführer Heinz Knappich. This tank is also shown in detail and discussed on page 17 of the Camouflage & Markings section.

This Panther ausf G of 2.Kompanie, SS-Panzer-Regiment 1 was disabled in the fighting for the town ofStoumont on 19 December 1944. The condition of the turret, where the anti-magnetic mine paste has reacted to the heat, and the position of the Balkenkreuz would suggest that this is one of the tanks assembled by Daimler-Benz during September1944 where the turret only was coated in Zimmerit (see also page 63).

On 9 February 1945, the division began moving to the East and ended the war fighting in Hungary as part of 2. Panzerarmee.

SS-Panzer-Regiment 10. Formed in February 1943, the regiment was attached to l0.SS-Panzer-Division Frundsberg. The regiment's I.Abteilung began its conversion to the Panther in October 1943 but was forced to wait until 27 July 1944 for the first tanks to arrive, with the last twenty-five vehicles being received on 11 December. This number is of course far short of that needed for a full battalion and I.Abteilung was eventually organised with two companies of Panthers and two companies of Pzkpfw IV tanks.

In January 1945, the regiment returned to l0.SS-Panzer-Division and took part in Operation Nordwind, the last major offensive in the West, and from 7 January fought in the Gambsheim bridgehead and near Brumath. A supplementary attack was mounted from Schirrheim towards Hagenau on 24 January but this was eventually beaten back by intense artillery fire. The division was withdrawn from The front on 3 February 1945, and shortly after this began moving to the East to join Heeresgruppe Weichsel in Pomerania.

SS-Panzer-Regiment 12. Formed in November 1943, the regiment was attached to 12.SS-Panzer-Division Hitler Jugend.

The regiment's I.Abteilung received its first Panther tanks in May 1944. The division fought in Normandy as part of 1.55- Panzerkorps and lost all its heavy equipment in the battles around Falaise and the retreat to the Seine. In November the regiment's first battalion was rebuilt with two companies of Panthers and two companies of Pzkpfw IV tanks and this single-battalion organisation would remain in place until the end of the war.

The Hitler Jugend division formed part of 6. Panzerarmee during the Ardennes Offensive, reporting that forty-one Panthers and thirty-seven Pzkpfw IV tanks were on hand just before the assault commenced.

The division took part in the attack on Krinkelt, in which the Panzer regiment was badly mauled, and also in the fighting around Büllingen and Bütgenbach. In late December the division was subordinated to ILSS-Panzerkorps and was engaged in the battle for the Ourthe River bridgehead and in the fighting around Bastogne. On 10 January 1945, 12.55- Panzer-Division was withdrawn from the front and sent to Cologne. On 2 February the division was sent to the East and fought in Hungary as part of 8.Armee and 6.Panzerarmee, gradually withdrawing into Austria.

Notes

---

1. The names of many Waffen-SS formations were changed at various times throughout the war and in this book I have used the titles current in December 1944

From January 1943, when the first tank left the assembly line, until May 1945, when the last vehicle was produced, the Panther was subject to several major redesigns and a series of modifications. These changes were sometimes introduced as economy measures but also as a means of increasing the Panther's combat efficiency and to remedy a number of technical problems, many of which bedevilled the design throughout its existence.

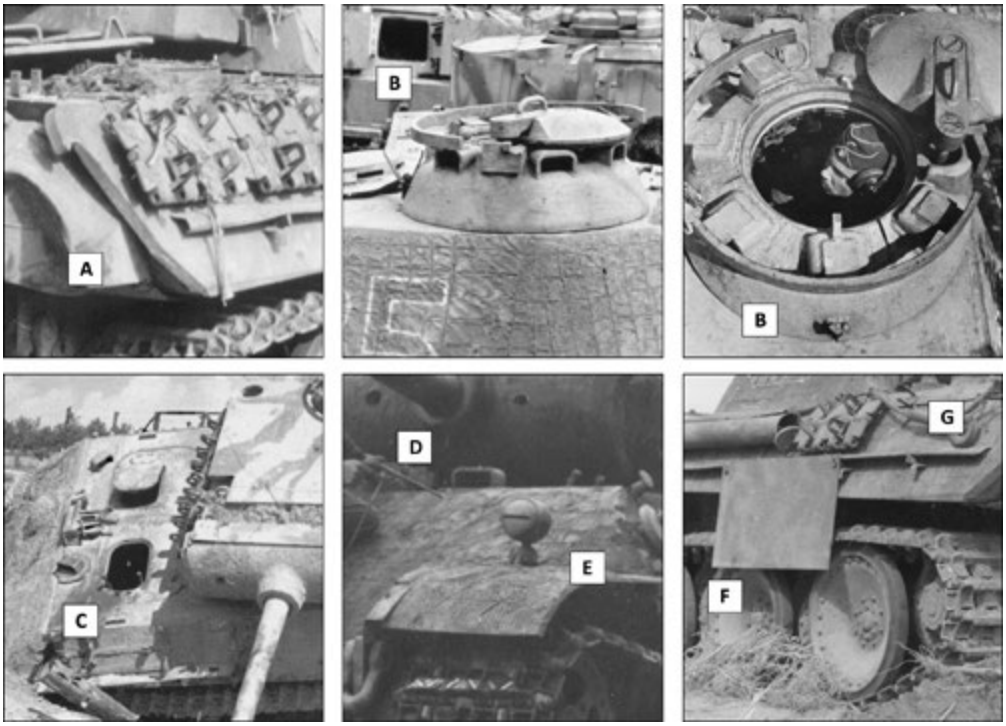
When it was decided in May 1943 that the Panther II project was to be postponed, many of its simplified design aspects were incorporated into the chassis of the next generation of the Panther, the ausf G model.

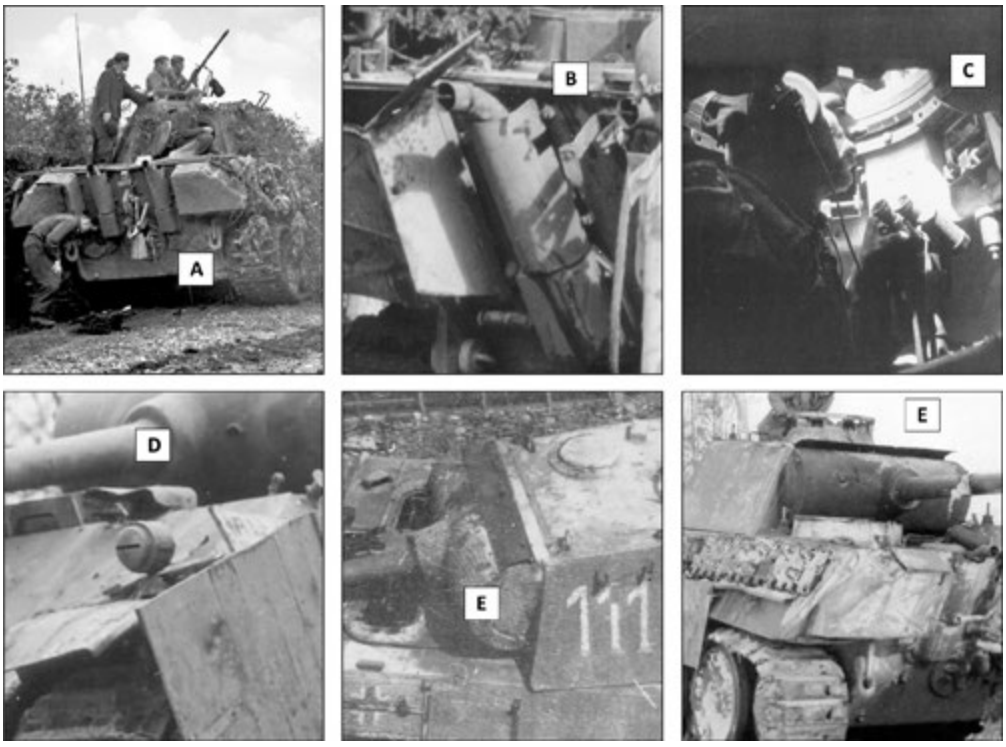
Beginning in March 1944, production of the Panther ausf G would see almost 2,000 vehicles leave the assembly lines and in the limited period of our study, from January to May 1945, this model would be the most important variant at the front. Although production of the Panther ausf D ceased in September 1943 and that of the Panther ausf A in July 1944, many of these older models were still in service in 1945 and I have included a number of modifications here which would be applicable to both. It should also be remembered that many changes made in the factories were eventually adopted by units in the field. Technical aspects of the Panther project are also discussed in Panther Tanks: German Army and Waffen- SS Normandy Campaign 1944, the third book in this series.

The most distinctive feature of the Panther ausf G was the angled sides of the hull (A) made up from single plates. The turret was initially the same as that used for the Panther ausf A with its cast cupola (B) and would only differ in small details as production continued and the war progressed.

Other features which differentiated the Panther ausf G from the earlier models included new driver's and radiooperator's hatches (C) which were now hinged, as opposed to the pivoting versions of the earlier tanks, a periscope with armoured cover (D) which was installed on the hull roof in front of the driver's hatch and the deletion of the driver's visor. The single Bosch headlight (E) was moved from the glacis to the left fender, the rear deck, including louvres and the air intakes, was completely redesigned and the hull Schürzen (F), or skirts, were now fixed to an extended fender (G) which ran for much of the length of the hull sides.

In addition, the tool stowage on the hull sides was revised and this can be seen in the colour profiles of the Camouflage & Markings section of this book. As mentioned above, most of these features were taken from the same design used for the Panther II (1).





Final assembly of the Panther ausf G was undertaken by Daimler-Benz, at the company's Berlin-Marienfelde plant, Maschinenfabrik Niedersachsen-Hannover (MNH) and Maschinenfabrik Augsburg-Nürnberg (MAN), with the first two tanks leaving the factories in March 1944.

Listed below are the major modifications that were incorporated from that time. It should be noted that many of these were applied to the Panther ausf A which was still in production.

May 1944. To simplify construction, the cast armoured guards that protected the exhaust pipes where they entered the hull were replaced by welded versions (A).

June 1944. Sheet metal covers (B) were fitted over the exhaust pipes above the armoured guards. These pipes regularly become hot enough to produce a visible glow making the tank an easy target. In response to complaints from tank crews that the turret rear access hatch could not be opened from the outside, a handle was added. Three sockets, or Pilzen, were welded to the turret roof to accommodate the 2-ton Befehlskran jib boom. These last two modifications were also to be carried out by units in the field and incorporated into the assembly of the Panther ausf A, which was still in production.

July 1944. It was found that the periscopes (C) fitted to the commander's cupola were liable to come loose if the tank experienced any violent vibration and, in addition, they were difficult to remove and replace. In this month, a frame and improved fastener were installed. At the same time the assembly plants were ordered to cease the installation of a mount for an observation periscope, or Sehstab, in the cupola. Both these modifications were essentially internal and are rarely seen in photographs. On 17 July, the decision was taken to drop the air intake cover on the front hull from production but this was reversed within days.

August 1944. In line with an order issued in the previous month, a rain guard (D) was fitted over the driver's periscope. A metal debris guard (E) was added to the turret roof to cover the gap behind the mantlet of the main gun. The hatches of the driver and radio operator were fitted with new hinge fasteners which allowed the hatches to be opened upward and jettisoned in an emergency. Beginning in this month, camouflage patterns were applied at the assembly plants. These patterns and the colours used are discussed further on page 60.

September 1944. The application of Zimmerit was dropped and a new factoiy- applied camouflage scheme was instituted. Interior surfaces

were no longer to be painted with Elfenbein RAL 1001 but instead left in their primer coat. A new gun mantlet, which featured a prominent chin, or Kinnblende (A), was incorporated into production. Its introduction was, however, slow and the earlier round design was used until the end of the war. A lengthened rain guard was fitted over the sight aperture of the gun mantlet. A small number of vehicles were fitted with FG 1250 infrared searchlights and sighting equipment. A limited number of MAN produced vehicles, perhaps as few as twenty-four, were fitted with steel-tyred roadwheels.

October 1944. A self-cleaning rear idler replaced the version that had been used since production commenced (B). In an effort to further reduce the glow produced by the exhaust pipes, both were fitted with Flammenvemichter mufflers (C). A crew internal compartment heater (D), or Kampfraumheizung, was introduced. The distinctive housing for the heater's cooling fan, situated on the rear deck, is clearly visible in period photographs. Three mounts to hold poison gas identification panels were fitted to the turret roof.

November 1944. The Waffenamt ordered that a wiper be fitted to the protective glass of the sighting telescope. The management of MNH reported that these were still not available in January 1945.

December 1944. A new factory-applied camouflage scheme was instituted and this is discussed further on page 61. Beginning in December, units in the field were ordered to fabricate protective covers from pieces of hull Schürzen to cover the louvres on the rear deck.

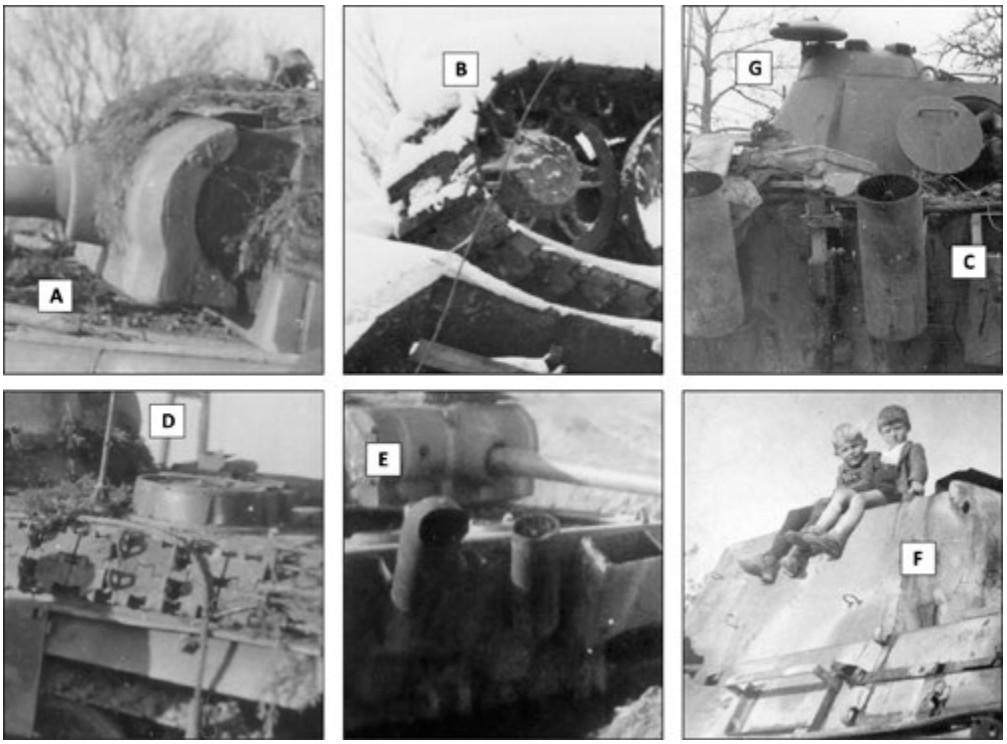
January 1945. The ring for the antiaircraft machine gun, welded to the commander's cupola, was dropped from production (G). A much

simplified antiaircraft machine gun mount was adopted while internally the loader was no longer provided with a seat. Curved hoods for the Flammenvemichter mufflers (E) were fitted to twenty tanks assembled by MAN during the last week of the month. The Waffenamt ordered that these were to be back-fitted to all Panthers fitted with the Flammenvemichter.

February 1945. The use of Elfenbein RAL 1001 as an interior surface coating was resumed.

March 1945. Metal rings (F) were welded to the turret sides. There is some suggestion that these may have been introduced weeks earlier. A number of tanks assembled by MAN were fitted with a steel-tyred roadwheel at the last station. The reason for this is unknown but it may have been simply due to a shortage of rubber-tyred wheels.

April 1945. The last Panthers leave the assembly lines.


A
B
G
C
D
E
F

252

This Panther ausfG of Panzer-Brigade 113 was disabled in September 1944 when the brigade supported elements of ll.Panzer-Division in an attack near Rechicourt, north-east of Metz. The large rain guard over the driver's periscope and the coating ofZimmerit, applied in the pattern indicative of MNH-produced tanks, would suggest that this vehicle was assembled in August or the first week of September 1944.

Panther ausfG Fahrgestellenummer 121052, photographed at the MAN plant near Nuremberg in late 1944. This tank is painted in the factory-applied camouflage scheme introduced in August and it seems that the wheels have also been painted in one, or both, of the darker colours. A small number of tanks were built by MAN in September 1944 with the steel roadwheels depicted here.

Notes

1. The Panther II was under development at the same time as the Panther ausf D and it was intended, as an economy measure, that its design would include parts that were interchangeable with the Tiger II.

In February 1943 the Oberkommando des Heeres (OKH) introduced a system where units in the field, taking into consideration the conditions of the local terrain and climate, could be responsible for the camouflage of their armoured vehicles. Tanks now left the assembly plants in a colour at first referred to as Dunkelgelb nach Muster and later Dunkelgelb RAL 7028, a dark yellow shade. Formations were to be provided with two camouflage colours, initially RLM Olivgrün and Rotbraun RAL 8017, in the form of a paste in either 2- or 20-kilogram tins which could be diluted with either water or petrol, the latter apparently giving the best result.

Importantly, this also saw the end to the practice of units sourcing paint directly from commercial suppliers and a subsequent directive issued in April 1943 contained a table indicating the exact amount of paint required, by weight, to paint a specific type of vehicle (1).

The importance of the economic use of paint had been mentioned in every major order regarding vehicle camouflage issued since the beginning of the war and over time it must have became clear that the system introduced in early 1943, although flexible, was prone to waste. In addition, the summer of 1944 had seen the Wehrmacht suffer disastrous losses on both fronts and the need to alleviate the logistics burden of front-line units may have contributed to some extent in the decision to eliminate Zimmerit anti-magnetic mine paste from the assembly process and the introduction of factory-applied camouflage schemes.

On 19 August 1944 the Heereswaffenamt (2) advised the assembly plants that the practice of units in the field creating their own patterns of camouflage would halt immediately and that a more-or-less standard scheme would be applied to vehicles before they left the factories.

The base colour of Dunkelgelb RAL 7028 would be retained, over which large patches of Olivgrün RAL 6003 and Rotbraun RAL 8017 were to be painted. The order stressed that every effort was to be made to deliver the remaining August consignment in the new factory-applied schemes and as a total of 356 vehicles were assembled in that month, perhaps as many as one-third of that number received the new camouflage. On 7 September 1944, the Generalinspekteur der Panzertruppen ordered the end of the application of Zimmerit anti-magnetic mine paste and this was first put into effect at MNH two days later when Panther Fahrgestellenummer 128562 left the assembly line (3).

In late October 1944 a directive issued by the Heereswaffenamt stipulated that component manufacturers and assembly plants were to cease the use of Dunkelgelb RAL 7028 as a base colour for the exterior surfaces of armoured vehicles. Over the basic primer colour, tanks were now to be painted in a camouflage scheme made up of what was described as patches of Rotbraun, Olivgrün and Dunkelgelb, once the assembly process had been finalised.

Interestingly, one of the most complete pieces of documentary evidence that has survived the war, and the source most often cited, is a directive dated 31 October 1944 from Heeres-Abnahmestelle II(K), a branch of the army acceptance office located at Hannover, informing the management of the MNH factory at Hannover of the change. The order clearly stated that if Dunkelgelb was not available, Dunkelgrau RAL 7021 was a permissible alternative, although the latter was to be conserved if at all possible. This would seem to be a rather curious decision as the two colours are at almost opposite ends of the colour spectrum but it does suggest that significant stocks of the early-war dark grey paint were available and that its use in the future was at least being contemplated (4).

A Panther ausf G ofl. Kompanie, SS-Panzer-Regiment 1 disabled during the fighting in the Ardennes in late 1944. Although the hull is badly scorched, the Disc camouflage pattern is clearly visible on the turret side. At least four variations of this scheme have been identified from photographs and examples are shown in the Camouflage & Markings section of this book.

It is probable that the October order was merely the formalisation of a practice that had been in place with some major firms, notably Henschel und Sohn, the manufacturer of the Tiger II, since mid-September, coinciding with the discontinuation of the application of Zimmerit. In these unofficial camouflage schemes, large portions of the vehicle were apparently left in their primer colour and this process was probably continued.

Although the camouflage colours are all identified by their RAL numbers in the Heeres-Abnahmestelle document, the primer is simply referred to as ‘red oxide’ and the exact colour of this paint is also the subject of some debate (5). In their extensive research into this subject Hilary Doyle and the late Thomas Jentz state that the primer used was RAL 8012, sometimes

referred to as Oxidrot, which had been in use when the war started. This paint was a dull red, drying to a matt finish, which was also used extensively in the automotive and shipbuilding industries.

Czech author Tomas Chory, who has published works on the colours of both the Heer and the Luftwaffe, is adamant that RAL 8012 had been completely replaced as a primer for armoured vehicles between early 1942 and the spring of 1943 by RAL 8013, a medium chocolate-brown shade with a hint of red (6) . Although Chory does not quote an official order or instruction, RAL 8013 would seem to be far more suitable as a camouflage colour than the distinct red of RAL 8012, and he goes further to say that the former was sometimes used in place of RAL 8017 Rotbraun when stocks of that colour were not available (7).

The only documentary evidence that I have been able to find which may clarify this is a list of twenty colours, which probably accompanied one of the official orders, that has survived the war and was found in the archives of the Volkswagen company. The list is headed by RAL 8013, which is described as Rotbraun, while RAL 8012 is not included. Titled Genormte Anstriche, or standardised painting, the list is unfortunately undated but the inclusion of Gelbbraun RAL 8020 and Grau RAL 7027, the North Africa colours, would suggest that it was not compiled before March 1942. Similarly the omission of any of the February 1943 colours would seem to fit with Tomas Chory's timeline. It will be remembered that there was no explicit identification by RAL code of the primer colour in the Heeres-Abnahmestelle October 1944 order mentioned by Jentz and Doyle who may have assumed, understandably, the use of RAL 8012 Oxidrot. If Chory is correct, and I believe he is, the camouflage schemes applied from late October would have been little different in appearance to those employed as a result of the 19 August 1944 order, the essential distinction being the amount of paint required to cover the vehicle and economy in this area was a constant theme of the army's orders from as early as 1940.

In any case, by 29 November 1944, the Heereswaffenamt had advised vehicle manufacturers that a new system was to be introduced where the armour components were to be painted in a base coat of Dunkelgrün RAL 6003, referred to in previous orders as Olivgrün, before they were delivered to the assembly plants. Once the tank was ready for shipment it was to be camouflaged by the addition of patches of Rotbraun RAL 8017 and Dunkelgelb RAL 7028 painted in sharp contours.

Curiously, the actual implementation of this scheme was not to take place until 1 March 1945 and I can offer no explanation as to why such a long delay was projected as the required colours were already in use. Less than a month later, on 20 December 1944, a new order was issued by the Heereswaffenamt directing that the painting of armour components in Dunkelgrün RAL 6003 was to begin immediately and Heeres-Memorandum: Anstrich des Heeresgerät, disseminated just five days later, on Christmas Day 1944, went into more detail regarding how different surfaces were to be coated. Dated 3 February 1945, Heeres-Verordnungsblatt Nr. 52 brought all these orders together confirming that the base coat was to be Dunkelgrün RAL 6003, camouflaged with Rotbraun and Dunkelgelb applied in equal amounts, with the green shade as the predominant colour (8). The camouflage was to be completed after final assembly and a template or guide was provided.

Interestingly, Heeres-Verordnungsblatt Nr. 52 states clearly that Dunkelgrün was intended to replace Dunkelgelb as the standard base coat, implying that the use of the primer colour, ordered in late October, had been less than universal. In addition, the dark yellow base colour to be replaced is referred to as Dunkelgelb RAL 7028 while the camouflage colour mentioned in the same document is called Dunkelgelb RAL 7028 Ausgabe 1944 suggesting that this latter shade may have been somehow different to the colour stipulated in April 1943(9).

An example of the so-called dot or Ambush camouflage scheme employed by Daimler-Benz until late september 1994. the additional man-hours required apply the small contrasting dates may have contributed to the scheme being abandoned

The order went on to state that although the use of Dunkelgelb as a base colour was to stop immediately, deliveries to front-line units were not to be delayed due to the lack of a suitable colour paint. How many Panthers were painted according to this instruction is not known and although the total number assembled from the beginning of February 1945 until the end of the war was 243, a considerable number of those may have been finished in the Dunkelgelb RAL 7028 base coat. We can only guess at the number of tanks that were camouflaged according to the October 1944 order, using their primer as a base colour, and these may have been quite rare. With each order or instruction detailed diagrams titled Anstrich-Muster, or paint pattern, were issued for specific vehicles and although very few of these have survived the war we can assume that templates existed for the Panther. The assembly plants apparently felt that these were to be treated as a guide only and as with the patterns created by the different styles of application of Zimmerit, as discussed in some detail in the third book in this series Panther Tanks: German Army and Waffen-SS Normandy Campaign 1944, a

particular style of camouflage could, generally speaking, identify a specific manufacturer (10).

Photographs taken during the battles of September and October show what are clearly factory-applied schemes and although they are difficult to interpret, due to the ridges of the Zimmerit coating, the early patterns seem to have continued in use for some time.

Maschinenfabrik Augsburg-Nürnberg (MAN). The concept of a factory-applied camouflage scheme may have been trialed by MAN as early as the spring of 1944, based on photographs of Panther ausf G tanks of SS-Panzer-Regiment 1 and Panzer-Abteilung 2105 which show strikingly similar patterns.

By September vehicles produced by MAN, many still coated in Zimmerit, were covered in large swathes of Olivgrün and Rotbraun over the Dunkelgelb base. In addition some tanks were painted in the so-called Disc Pattern which was applied over the darker camouflage colours in Dunkelgelb with the aid of a stencil made up of discs of varying sizes which matched left to right and top to bottom providing, in theory at least, a seamless pattern across all surfaces. This pattern was applied to the late August production batch, which would have featured Zimmerit, and its use continued until at least the end of September 1944 (11).

A variation of the Disc Pattern was also used by MNH and was applied at about the same time that Daimler-Benz were painting their Panthers in the contrasting Dot Pattern (see below). Collectively, these camouflage schemes are referred to variously as Hinterhalt, Überfall and Licht und Schatten or, more often, Ambush. But it should be remembered that these

are all post-war inventions and we have no idea if they were called anything other than Tarnanstrich, or camouflage, in 1944.

During October 1944 a more simplified pattern was adopted and the similarity of the camouflage schemes applied by the manufacturers, particularly MAN and Daimler-Benz, would seem to confirm that some kind of guide or template was being followed. The October camouflage scheme was characterised by a band of Dunkelgelb running across the front of the commander's cupola and down the right side of the turret towards the gun mantlet. The front of the turret around the top edge was painted in Rotbraun. On the hull glacis a band of Dunkelgelb ran from the top of the right-hand side to the Kugelblende machine-gun mount with another band beginning near the driver's periscope which ran towards the right until it met the lower hull where it turned abruptly left. The bands of colour which made up the Daimler-Benz camouflage patterns were painted with more obviously wavy edges than those of the MAN schemes. Nevertheless, the patterns were so similar that it is often only possible to differentiate the two by the placement of the Balkenkreuz with MAN painting the marking on the hull front, or omitting it altogether, and on the right rear stowage box (12). Generally, Panthers produced by Daimler-Benz at this time had the Balkenkreuz placed on the hull side and left rear stowage bow (see below).

From November 1944 the relatively standardised pattern seems to have deteriorated into a scheme of irregular patches of the three colours and an examples of these are shown in the Camouflage & Markings section (13).

Daimler-Benz (DB). This company seems to have followed the practices of MAN quite closely and the patterns applied in September and October were very similar, with the main difference being the edges of the Dunkelgelb bands as mentioned above. A unique refinement employed by Daimler-Benz was the addition of contrasting dots to the bands of colour. This pattern was very short-lived and was

discontinued, probably for reasons of economy, in late September 1944. It is almost universally referred to today as Ambush camouflage, although this term is a recent invention.

As mentioned above the Panthers manufactured by Daimler-Benz could often be identified by the placement of the national insignia and other factory- applied markings. The Balkenkreuz was painted over the tool stowage bracket on the left-hand side, near the centre of the hull side on the right and on the left side rear stowage box. In 1945 the left-hand side Balkenkreuz was moved to a position behind the gun cleaning tool tube on the hull side (14).

Maschinenfabrik Niedersachsen Hanover (MNH). Tanks produced during SepterirSt" featured a pattern of camoufL.gJ which was very similar to those in use with MAN and Daimler-Benz made up of patches of Olivgrun and Rotbraun on the Dunkelgelb base coat. A version of the so-called Disc Pattern camouflage was also used during this time.

From October 1944, a completely revised pattern was adopted made up of wide parallel bands of Olivgrun and Rotbraun over which wavy lines of Dunkelgelb were painted, often quite roughly and at a slightly different angle. By the end of the year the lines of Dunkelgelb had increased in thickness and were now a demarcation between the two darker colours. In January 1945, in a slight variation, the Dunkelgelb lines were made much thinner and their edges were straighter.

Panthers manufactured by MNH had the Balkenkreuz national insignia painted onto the turret sides although a significant number were issued

without any markings.

An example of the late war MNH camouflage described above. The large letter G on the hull glacis indicates that this tank was filled with Glysantin anti-freeze which could not be mixed with other coolants.

Notes

---

1. The April directive also replaced RLM Olivgrün, a Luftwaffe colour, with Olivgrün RAL 6003. It was also the first occasion when Dunkelgelb was referred to as RAL 7028.

2. The Heereswaffenamt was the army's ordnance office. The Amtsgruppe für Industrielle Rüstung-Waffen und Gerät 6, or Wa J Rü- WuG 6, was the branch concerned with the manufacture of weapons systems, specifically tanks and tractors.

3. Therefore, at least some of the August and probably a small number of the September production vehicles featured the new camouflage scheme painted onto the Zimmerit coating.

4. This has led to endless speculation and claims that shortages of paint in the last weeks of the war saw tanks painted in Dunkelgrau RAL 7021. Although I would hesitate to say this was not possible, I feel that most theories are based on wishful thinking.

5. The camouflage colours were actually referred to in this instruction as Braun, Grun and Gelb. As the RAL codes given were certainly correct, these names were probably widely accepted abbreviations.

6. This colour had in fact been in service with the Kriegsmarine for some years where it was known as Schiffsbodenfarbe III rot 5 and used to paint ships and boats below the waterline.

7. A number of model paint manufacturers refer to RAL 8012, quite incorrectly, as Rotbraun when it is in fact a very distinct red shade dulled only by its matt finish.

8. Heeres-Verordnungsblatt were orders dealing with unclassified information and this instruction, as detailed as it is, may have been intended to clarify the current position for the manufacturers concerned. This particular memorandum was titled Anstrich des Heeresgerat: Neufertigung, or new instructions for the painting of army equipment.

9. The inclusion of the Ausgabe 1944 suffix has been seized upon by some, including Chory, to claim that as many as four different shades of Dunkelgelb existed. The extensive research carried out by Jentz and Doyle over many years convinced them there was only one shade of Dunkelgelb, with minor deviations caused by variables in the production process. My personal belief is that if the Ausgabe 1944 colour was significantly different it would have merited a completely new RAL code.

10. There is some evidence that Daimler-Benz adopted the distinctive pattern of Zimmerit seen on its Panthers solely to distinguish them from those assembled at MAN, the company's main rival. It should be remembered that these were large commercial concerns operating in a competitive environment.

11. A number of tanks were apparently assembled by MAN and Daimler-Benz at this time from new hulls, without Zimmerit, fitted with turrets still coated with the anti-magnetic mine paste.

12. In addition MAN regularly stencilled the tank's chassis number onto the glacis or gun travel lock but this practice may not have been limited to that company. A small number of MAN Panthers painted in the Disc Pattern camouflage had no national markings at all.

13. A small number of the vehicles produced during March and April 1945, perhaps as few as thirty, were camouflaged in a pattern made up of just two, or very rarely three, colours finished as hard edged, widely spaced bands.

14. With the exception of some early production Panther ausf G tanks, is quite rare to find a Fahrgestellenummer marked on a Daimler-Benz vehicle.

Dragon Models Ltd

B1-10/F., 603-609 Castle Peak Rd.

Kong Nam Industrial Building

Tsuen Wan, N. T., Hong Kong.

www.dragon-models.com

Tamiya Inc

Shizuoka City, Japan

www.tamiya.com

Trumpeter/Hobby Boss

NanLong Industrial Park, SanXiang,

ZhongShan, GuangDong, China

www.trumpeter-china.com

www.hobbyboss.com

Academy Plastic Models

521-1, Yonghyeon-dong, Uijeongbu-si,

Gyeonggi-do, Korea

www.academy.co.kr

Hobby Fan/ AFV Club

6F ., No.183, Sec. 1, Datong Rd, Xizhi City

Taipei County 221, Taiwan

www.hobbyfan.com

Royal Model

Via E. Montale, 19-95030 Pedara, Italy

www.royalmodel.com

Italeri S.p.A.

via Pradazzo 6/b,

40012 Calderara di Reno, Bologna, Italy

www.italeri.com

Takom

www.takom-world.com

Meng-Model

Galaxy Century Bldg., No. 3069 Caitian Rd.,

Futian Dist., Shenzhen, Guangdong, China

www.meng-model.com

Amusing Hobby

3-16-19 Ima, Kita-ku, Okayama Japan

www.amusinghobby.com

Rye Field Models

www.ryefield-model.com

An almost non-existent website. I would

recommend one of the on-line retailers.

Hauler

Jan Sobotka,

Moravska 38, 620 00 Brno

Czech Republic

www.hauler.cz

Voyager

Room 501, No.4114th Village,

SPC Jinshan District, Shanghai 200540

P.R.China

www.voyagermodel.com

Griffon Model

Suite 501, Bldg 01, 418 Middle Longpan Rd,

Nanjing, China

www.griffonmodel.com

Aber

ul. Jalowcowa 15, 40-750 Katowice, Poland

www.aber.net.pl

E.T. Model

www.etmodeller.com

Friulmodel

H 8142. Urhida, Nefelejcs u. 2., Hungary

www.friulmodel.hu

Modelkasten

Chiyoda-ku Kanda, Nishiki-Cho 1-7, Tokyo, Japan

www.modelkasten.com

Very difficult to navigate but worthwhile.

Airfix

www.airfix.com

Revell

www.revell.com

Eduard Model Accessories

Mirova 170,435 21 Obrnice,

Czech Republic

www.eduard.com

Master Club

www.masterclub.ru

It appears that this firm is closely associated

with Armour35, a Russsian mail-order firm.

Model Artisan Mori

Yasutsugu Mori,

Maison Suiryu 302, Kunoshiro-cho 1-10

Yokkaichi-City, Mie 510-0072, Japan

www.artisanmori.web.fc2.com

Model Factory Hiro

Yubinbango 121-0063 Adachi-ku, Tokyo

Higashihokima 2-Chome, 3-8 Japan

www.modelfactoryhiro.com

RB Model

Powstancow Wlkp.29B,

64-360 Zbaszyn

Poland

www.rbmodel.com

M Workshop Singapore

91 Bencoolen St, Sunshine Plaza 01-58,

Singapore

www.themworkshop.com

Zvezda (Zvezda-America)

www.zvezda-usa.com

Note that the Russian catalogue is not the

same as the US version.

ROCHM Model

www.rochmmodel.com

rochmmodel@gmail.com

This company has a huge selection of parts

and accessories for 1/35 scale Panther

models.

The author would like to thank Karl Berne, Valeri Polokov and J.Howard Parker for their invaluable assistance with the photographs and period insignia and acknowledge the research of Martin Block and the late Ron Klages. Of the product manufacturers special mention should go to Roberto Reale of Royal Model, ShengHul of ROCHM, Jan Zdiarsky from Eduard Accessories and Freddie Leung of Dragon Models.

Photographed in early 1945, this Panther ausf G of 4.Kompanie, SS-Panzer-Regiment 2 is probably one of the tanks disabled outside the village ofManhay, 12 kilometres north of Houffalize, on the morning of 24 December 1944. In a confused action, Hauptscharfuhrer Franz Frausscher led four Panthers of his platoon in an attack from Grandmenii towards Manhay and its bridge over the Meuse and the tank shown here is one of perhaps two lost in the battle. It was later overturned by a US Army bulldozer in an effort to clear the road. This tank was assembled some time after October1944, as evidenced by the self-cleaning rear idler and raised housing for the crew compartment heater.